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Published weekly by the Simmons-Boardman Publishing Corporation at Orange, Conn., and entered as second class matter at Orange, Conn., under the act of March 3, 1879. Subscription price, \$3.00 a year to railroad employees only in U. S., U. S. possessions, Canada and Mexico, payable in advance and postage free. Subscription price to railroad employees elsewhere in the Western Hemisphere, \$10.00 a year; in other countries, \$15.00 a year. Two-year subscriptions double the one-year rate. Single copies 50¢, except special issues \$1. Address Robert G. Lewis, Assistant to President, 30 Church Street, New York 7

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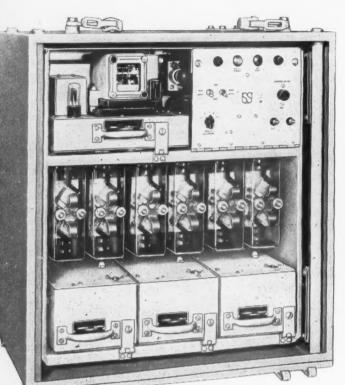
Editorial and Executive Offices at 30 Church Street, New York 7, N. Y., and 79 West Monroe Street, Chicago 3, III. Branch Offices: 1081 National Press Building, Washington 4, D. C.—Terminal Tower, Cleveland 13, Ohio.—Terminal Sales Building, Portland 5, Ore.—1127 Wilshire Boulevard, Los Angeles 17, Cal.—244 California Street, San Francisco 4, Cal.—2909 Maple Avenue, Dallas 4, Tex.

Published by SIMMONS-BOARDMAN PUBLISHING CORPORATION, New York 7

Railway Age Railway Mechanical & Electrical Engineer Railway Engineering & Maintenance Railway Signaling & Communications Car Builders' Cyclopedia Locomotive Cyclopedia Railway Engineering & Maintenance Cyclopedia American Builder Marine Engineering & Shipping Review Marine Catalog & Directory Books covering transportation and building

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CURRENT RAILWAY STATISTICS

CORREITI KAILITAI SIA	
Operating revenues, three month	e
1952 \$ 1951	2,587,471,939
Operating expenses, three month	5
1952 \$. 1951	2,010,191,343 1,931,462,248
Taxes, three months	
1952 \$ 1951	316,254,128 282,526,069
Net railway operating income, the	ee months
1952 \$ 1951	218,601,209 178,597,152
Net income, estimated, three me	onths
19 <i>5</i> 2 \$ 19 <i>5</i> 1	142,000,000
Average price railroad stocks	
May 20, 1952	59.78 52.70
Car loadings, revenue freight	
Car loadings, revenue freight 19 weeks, 1952 19 weeks. 1951	13,714,753 14,257,618
Average daily freight car surplus	
Week ended May 17, 1952 Week ended May 19, 1951	24,248 7,298
Average daily freight car shorta	ge
Week ended May 17, 1952 Week ended May 19, 1951	2,312
Week ended May 19, 1951	10,025
Freight cars delivered	
April 1952	7,403 8,274
	8,2/4
Freight cars on order	108,270
May 1, 1951	155,871
Freight cars held for repairs	
April 1, 1952	94,509 86.246
Net ton-miles per serviceable car	per day
February 1952	1,027 964
Average number railroad employe	es
Mid-April 1952	1,229,835
Mid-April 1951	1,286,802



In This Issue . . .

L. C. L. FREIGHT can and should be attracted back to the rails, members of the A.A.R.'s Freight Station Section declared at their recent Cincinnati meeting. Their prescription centered around lower rates, which it was suggested, "would bring back sufficient volume to make more through cars possible, thus giving patrons improved service which in turn would help attract even more business." A complete report of the agents' meeting, including summaries of talks by J. H. Aydelott, C. S. Baxter and Section Chairman W. L. Ennis, appears on page 54.

NEWS OF THE WEEK included I.C.C. approval of Colorado & Southern refinancing; election of E. S. Glass as chairman of the Protective Section of the A.A.R.; announcement of a new all-time car load record; an I.C.C. okay of coach seat reservation charges on 16 eastern and southern railroads; retirement of J. L. Lancaster as chairman of the board of the T. & P.; an unusually large number of personnel changes in the railroad supply industry; and (on page 57) an I.C.C. study which purports to show that between 1928 and 1949 Class I railroads lost 29.5 per cent of their "potential" freight tonnage.

HOW TWO RAILROADS transformed old steam locomotive shops into modern diesel maintenance facilities is told in two illustrated feature articles. The first, beginning on page 41, covers the Milwaukee's unusual project of moving the structural frame of an old boiler shop a distance of 335 miles—from Minneapolis to Milwaukee—to make it the basis for a diesel heavy-repair shop. The second article, starting on page 48, deals with the Missouri Pacific's conversion of a steam locomotive back shop into a heavy-maintenance facility for 192 diesel units, plus servicing for 36 more.

HOW'S YOUR RAILROAD DOING? How is its operating ratio, its net railway operating income, its gross ton-miles per train-hour, its percentage of bad-order freight cars—either as compared with its own figures a year ago or with other similar roads this year? These and many other statistics are given in the tables which start on pages 22 and 70—revenue, expense and income figures for March and three months, for all Class I roads, on 22; and freight operating statistics for February, for the larger Class I roads, on 70.

THE FIFTH in the series of articles by E. W. Coughlin on ways and means of obtaining greater efficiency in movement of freight cars begins on page 44. It deals particularly with car handling in yards and terminals, where cars spend some 70 per cent of the time they are in railroad hands.

WEEK AT A GLANCE



ARTHUR R. SEDER, vice-president, accounting, of the Chicago & North Western, and vice-president and comptroller of the Chicago, St. Paul, Minneapolis & Omaha, has been elected vice-president in charge of the Finance, Accounting, Taxation and Valuation Department of the Association of American Railroads. He succeeds Edward H. Bunnell, who retired on February 29. Further details concerning Mr. Seder's new appointment, which becomes effective June 1, are included in the news pages of this issue.

In Washington . . .

AT LONG LAST the three-year-old wage-rules dispute between the railroads and their conductors, enginemen and firemen appears to have been settled — mostly, it would seem at first glance, to the brothers' advantage. Apparently, however, the way may have been opened for future changes in some of the antiquated working rules which — like equally antiquated laws and regulations — are such a handicap to the railroads in making ends meet under today's highly competitive and inflationary conditions.

PASSENGER BUSINESS was the principal topic of the latest "Monthly Comment" of the I.C.C.'s Bureau of Transport Economics and Statistics—which is, in turn, the subject of several articles in the news columns. Among other things, the "Comment" states that the 1951 passenger service deficit—on the I.C.C. formula--reached an all-time peak of \$681.6 million; and that air lines, including air-coach passengers, again increased their share of the country's total "first-class" travel traffic, from 45.4 per cent in 1950 to 50 per cent in 1951. The "Comment" also showed that each dollar paid in wages by Class I railroads in 1951 bought only a little more than half as many gross ton-miles as in 1939—despite the major changes within the same period in the mechanical facilities for production of railroad service.

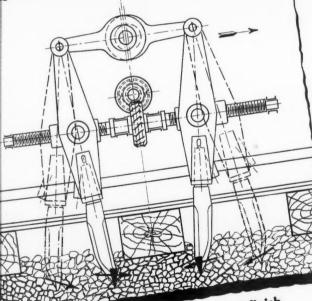
. . . And Elsewhere

OHIO'S CONVEYOR BELT FRONT—rather quiet in recent months—stirred slightly in late April when the Akron Beacon Journal asked members of the state's general assembly: "Would you vote today for approval of common carrier rights for the controversial Riverlake Belt Conveyor?" The paper reports that of the 111 members who acknowledged and replied to the poll, 46 answered "No," 30 favored the proposal, and 35 (many of whom said they were not entirely familiar with the subject) refrained from giving any opinion. The paper reports also that several members expressed dislike of the lobbying tactics used both by Riverlake and by opposing railroads.

BOTH RAILROADS AND AIR LINES, says the lead editorial in a recent issue of Aviation Age, "have been only too anxious to promote and advertise the negative aspects of the other's method of transportation." "Perhaps," it continues, "we're asking too much . . . but we think it worthy of a try if the air lines and the railroads could get their heads together, bury the past, and start out on a new program to sell transportation." Just that, the editorial points out, is done in Scandinavian countries, where the government owned railroads and the government sponsored air lines advertise "Ride With Both of Us"; where round-trip rail-air fares are available; and where timetables, in some cases, show rail, air and bus schedules in adjacent columns.

INFLUENCE OF THE VISTA DOME on younger generations may not yet be fully comprehended. Recently the Western Pacific carried a large group of school children aboard the "California Zephyr," and during the course of the trip each child was given an opportunity to ride in one of the domes. W.P. officers watched with interest the children's varied reactions. However, they were just a bit taken aback by one 10-year-old boy who remarked "Boy! What a place to make love!"





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Railroads Agree to New Steelman Plan to End 3-Year "Op" Dispute

Early settlement of the three-yearold wage and rules dispute between the railroads and three operating brotherhoods seemed probable last week after Dr. John R. Steelman, assistant to the President, came forth with a new "package" proposal for ending the controversy.

The proposal was submitted to the parties at 4 p.m. on May 19. At 7:30 that night the carriers announced they would accept it. The three unions—the Brotherhood of Locomotive Firemen and Enginemen, Brotherhood of Locomotive Engineers and Order of Railway Conductors—went into a long huddle to study the plan.

Dr. Steelman's plan for settlement contains these principal features:

A wage increase for roadmen of 12½ cents per hour in the basic rates, plus a 10-cent cost-of-living increase, or 22½ cents per hour.

Increases for yardmen amounting to 27 cents per hour in the basic rates, plus a 10-cent cost-of-living increase, or 37 cents per hour.

An additional increase of 4 cents per hour for yardmen "if and when they convert to the five-day week on individual properties."

The cost-of-living escalator clause, the three-year moratorium and a number of the rules would be "about the same" as agreed to in 1950 and 1951.

This latest Steelman plan appeared to be virtually the same as the pattern established in last year's settlement between the railroads and the Brotherhood of Railroad Trainmen (Railway Age, June 4, 1951, page 60).

A part of the basic wage increase provided by the present plan would be retroactive to October 1950, a part to January 1, 1951, and a part to March 1, 1951. Dr. Steelman estimated employees would receive from \$600 to \$1100 each in back pay, at a total cost to the carriers of approximately \$100,000,000.

The carriers have been setting aside funds to pay such an increase, however, since the abortive "Memorandum of Agreement" signed at the White House on December 23, 1950. That agreement, later rejected by the brotherhoods, called for wage increases retroactive to October 1, 1950. It provided for further increases on January 1, 1951, and contained other provisions on cost-of-living increases, a three-year moratorium, and for a few changes in working rules (Railway Age, December 31, 1950, page 36).

The wage rates that would become effective under the new Steelman plan would include the "interim" increase granted to the "ops" by the army on February 8, 1951. This amounted to 12½ cents per hour for yardmen and the cents per hour for roadmen. The proposed new increases therefore would not be over present wage rates, but over those in effect on October 1, 1950.

According to Dr. Steelman, his latest proposal contains some recommendations for changes in working rules. In the pooling of cabooses rule, he suggested a "slight change in language" for clarification but no change in sub-

A "principal change" was recommended with respect to procedure for processing disputes over interdivisional runs. The four operating brotherhoods and the carriers would set up a national committee to handle these disputes when they are not settled by negotiation or mediation under the Railway Labor Act.

The parties have agreed to arbitrate their dispute involving the "more than one class of road service" rule.

"OP" DISPUTE ENDS AS UNIONS ACCEPT PLAN

The three operating brotherhoods have accepted Dr. John R. Steelman's "package" proposal for settling their wage-rules dispute with the carriers. Since the railroads have already agreed to the proposal this means an end to the three-year-old controversy which was dotted with strikes and led to government seizure of the roads.

Acceptance of the settlement terms by the brotherhoods was with "some disappointment," but leaders of the three unions said "there are no better alternatives under one-sided government seizure." The unions announced their decision shortly before midnight May 21.

The following morning President Truman told his weekly press conference that as soon as papers could be signed he would return the railroads to private management.

Air Lines Took Half of 1951's "First-Class" Passenger Business

Passenger traffic of domestic scheduled air lines in 1951 amounted to half that year's combined air and first-class rail traffic. This compared with the air lines' 45.4 per cent "share" of the 1950

These and other figures comparing passenger traffic of domestic trunk air lines and parlor and sleeping-car traffic of railroads were contained in the latest "Monthly Comment" issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The air-line figures include so-called "air-coach" traffic. If that traffic were excluded, the air-line "share" of the 1951 business would be 46.6 per cent instead of 50 per cent.

The air lines' 1951 traffic, 10,211 million passenger-miles, was the highest annual level on record. It was 31.5 per cent above their 1950 business, which amounted to 7,766 million passengermiles. Meanwhile, passenger-miles reported by Class I railroads for parlor and sleeping-car traffic increased only 9.5 per cent-from 9,338 million in 1950 to 10.226 million in 1951.

Other figures presented by the bureau pointed up the rapid growth of the air lines' business since 1946. For that year they reported 5,903 million passenger-miles, which was but little more than half their 1951 traffic and which amounted to but 23 per cent of 1946's first-class travel business. The 1946 parlor and sleeping-car business of the railroads amounted to 19,801 million passenger-miles, twice the volume of their like 1951 business.

With further reference to "air-coach" business, the bureau noted that the 1951 passenger-miles in that service totaled 1,272 million. That reflected a five-fold growth since 1949, the first full year in which the service was offered. The 1949 "air-coach" business amounted to 249 million passenger-miles.

Net Railway Operating Income

	Freight	Passenger		
Year	service	service		Total*
	Millions	Millions		Millions
1936	\$891.7	d\$233.3		\$667.3
1937	827.1	d241.6		590.2
1938	626.3	d255.3		372.9
1939	837.9	d250.9		588.8
1940	942.5	d262.1		682.1
1941	1,223.1	d226.1		998.3
1942	1,394.4	89.3		1.484.5
1943	1.080.0	279.8		1,359.8
1944	871.3	234.1		1,106.3
1945	620.6	230.1		852.1
1946	759.7	d139.7		620.1
1947	1,206.4	d426.5		780.7
1948	1,561.0	d559.8		1,002.0
1949	1,335.5	d549.6		686.5
1950	1,547.7	d508.5		1,039.7
1951p	1,623.8	d681.6		942.5
*Includes	relatively small		not	related
to freight				

p. Preliminary figures.

ating expenses reported for such services and the remainder (26.5 per cent) consisted of the passenger services proportion of operating expenses that were common to both freight and passenger services."

Discussing the showing of the 35road table, the bureau noted that each of the 35 had passenger-service deficits in both 1950 and 1951; and that all but two of them (the New York, Chicago & St. Louis and the Denver & Rio Grande Western) had higher deficits last year than in 1950. Freight service net railway operating income for 1951 was larger than in 1950 for 21 of the 35 roads listed.

There was also in the "Comment" another table which showed results by territories. Last year's territorial deficits and operating ratios for passenger

1951 Passenger-Service Deficit Was \$681.6 Million, a New Peak

Last year's passenger-service deficit of Class I railroads amounted to \$681.6 million, an all-time peak, according to figures presented in the latest "Monthly Comment" issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

This exceeded by \$32 million the previous record deficit which was the 1949 figure of \$649.6 million. The passenger-service deficit of 1950 was \$508.5 million, but it would have been about \$615.5 million, except for inclusion, in that year's passenger-service revenues, of retroactive mail pay applicable to prior years.

Last year's net railway operating income from freight service amounted to \$1,624 million. The reported passengerservice deficit absorbed 42 per cent of this to make 1951's composite net railway operating income from all services \$942.5 million. This compared with net railway operating income of \$1,040 million in 1950, when the passenger-service deficit absorbed only 32.9 per cent of the freight-service net.

The results from passenger and freight services for the past 16 years are shown in an accompanying table, reproduced from the "Comment." the other table, also reproduced from the "Comment," are figures comparing 1951 and 1950 results for 35 large roads (which accounted for about 84 per cent of the freight service net and 86 per cent of the passenger-service deficit for all Class I roads in 1951).

As to the allocation of expenses, the bureau said: "Attention is called to the fact that in 1951 the operating ex-

penses related solely to passenger and allied services amounted to \$1,429.3 million or 73.5 per cent of total oper-

Comparison of 1951 and 1950 Results From Passenger and Freight Services

	LARG	SE RAILWA	YS (Dollar	items in t	housands)			
Road	Frei	railway o	Passen	ger and	Frei	ight		ger and
Koda	1951 ser	vice 1950	1951	services 1950	1951	1950	1951	services 1950
Eastern district			Deficit	Deficit				
Baltimore & Ohio	\$72,650	\$65,070	\$35,816	\$30,927	72.04	71.72	172.84	166.99
Boston & Maine	19,937	19,154	15,030	12,201	58.96	56.75	167.29	149.09
D. L. & W	13,601	13,195	5,111	4,147	72.02	69.49	121.62	115.39
trie	31,720	29,702	11,971	10,236	67.57	65.52	172.05	161.62
Lehigh Valley	14,149	11,854	3,756	3,453	71.45	71.62	140.63	141.33
New York Central	93,878	71,070	54,266	33,966	75.10	74.92	118.11	108.66
N.Y., C. & St. L	25,399	28,399	3,005	3,210	66.79	61.82	152.35	163.42
N.Y., N.H. & H	19,808	20,269	11,918	9,368	67.19	62.68	98.90	97.04
Pennsylvania	131,047	92,507	71,688	34,845	75.56	77.29	121.95	107.94
Reading	22,068	21,489	8,793	8,532	71.17	69.96	172.40	180.24
Wabash	15,387	14,554	5,323	3,159	69.87	67.84	129.75	120.70
Pocahontas region	10,007	17,004	3,020	0,107	07.07	07.07		
Chesapeake & Ohio	63,654	58,221	14,212	12.342	66.47	64.73	169.57	161.80
Norfo.k & Western	40,754	37,381	10,799	8,322	60.74	63.10	175.59	155.22
Southern region	40,734	37,301	10,777	0,522	00.74	00.10	173.37	, , ,
Atlant.c Coast Line	19,259	16,244	9,222	6.427	71.05	71.59	121.62	114.97
Gulf, Mobile & Ohio	16,205	14,432	6,645	5,121	62.33	61.44	150.06	135.43
	43,565	47,255	12,907	9,586	68.74	65.99	127.26	117.94
Louisville & Nashville			17,211	12,915	67.51	65.60	150.61	139.75
Seaboard Air Line	41,551	38,947			63.74	63.00	133.97	121.30
0 .1	29,303 42,094	24,572 42,382	10,118	7,211	64.56	61.93	126.64	120.44
	42,094	42,382	14,147	10,449	04.30	01.93	120.04	120.44
Western district A. T. & S. F. and								
affiliated cos	108,085	101,300	36,472	20,087	64.13	57.81	127.97	110.89
Chicago & N. W	30,570	29,895	23,346	20,762	73.37	70.04	151.63	145.97
C. B. & Q	46,099	47,705	15.988	9,904	61.48	57.61	126.98	111.01
C. M. St. P. & P	39,227	43,479	23,901	21,539	71.96	67.49	150.24	145.08
C. R. I. & Poc	30,676	30,880	13,419	10,945	65.46	62.23	128.14	123.66
D. & R. G. W	15,929	14,430	4,217	4,485	60.01	62.98	160.97	166.32
Great Northern	41,741	42,729	18,527	15,296	64.48	61.76	158.29	143.59
M-K-T Lines	12,624	13,479	5,448	4,383	65.91	62.59	139.31	127.76
Missouri Pac.	35,368	39,411	11,406	7,751	74.32	67.14	128.07	116.32
Northern Pac	28,686	33,113	12,355	10,424	70.46	65.07	162.08	150.13
St. LS. F	20,630	22,501	7,987	6,935	69.46	65.35	142.65	139.77
St. L. S.W. Lines	10,941	13,306	2.246	2,130	57.08	53.71	198.52	192.35
Southern Pac. Co	83,376	78,075	37,988	30,528	66.75	62.87	142.34	132.17
	17,924	18,175	6.745	5,198	68.37	66.53	128.27	125.22
Texas & N. O		12,003	3,638	2,357	61.14	60.79	127.61	114.96
Texas & Pacific	13,548	12,003	3,030	2,331	01.14	00.77	127101	11-4.70
Union Pac. and	70 000	74 0 40	42.042	30,157	61.96	59.22	152.51	134.19
leased lines	78,389	74,848	42,062	30,13/	01.70	37.44	104.01	10-117

service were as follows: Eastern district, \$273.3 million and 127.7; Pocahontas region, \$27.4 million, 155.3; Southern region, \$85.1 million and

131.4; Western district, \$295.8 and 142.0. Last year's country-wide operating ratio for passenger service was 134.2, compared with 1950's 124.0.

Wage Dollar Bought 45.5 Per Cent Fewer Ton-Miles in '51 than in '39

Each dollar paid in wages in 1951 by Class I railroads bought 45.5 per cent fewer gross ton-miles than the 1939 wage dollar, according to the latest "Monthly Comment" issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

The "Comment" had an article showing that 319 gross ton-miles were produced per employee dollar of compensation in 1951. The comparable figure for 1939 was 585 gross ton-miles. Meanwhile, however, gross ton-miles per employee hour paid for rose 28.8 per cent

—from 438 in 1939 up to 564 in 1951.
Figures for each year of the 1939-1951 period are shown in the accompanying table, reproduced from the "Comment."

The bureau's discussion of the figures suggested no reason for the unfavorable trend of gross ton-miles per employee dollar of compensation. As to the showing with respect to gross ton-miles per employee hour paid for, it said: "This great improvement no doubt reflects in part the rapid rise in use of dieselelectric motive power in the post-war years."

Gross Ton-Miles per Employee Hour and per Dollar of Wages

Class I line-haul railways

	Employee	Total		Gross	ton-miles
	hours	employee	Gross	Per	Per
	paid	compen-	ton	employee	employee
	for	sation	miles*	hour	dollar of
YEAR	Millions	Millions	Billions	paid for	compensation
1939	2,488.6	\$1,863.3	1,089.3	438	585
1940	2,615.9	1,964.1	1,181.9	452	602
1941	2,989.8	2,331.7	1,413.2	473	606
1942	3,441.0	2,932.1	1,756.9	511	599
1943	3,816.4	3,520.9	1,939.5	508	551
1944	3,996.9	3,858.0	1,985.3	497	515
1945	3,981.3	3,859.9	1,865.6	469	483
1946	3,633.3	4,170.2	1,662.8	458	399
1947	3,613.4	4,350.2	1,739.7	481	400
1948	3,546.2	4,768.8	1,701.5	480	357
1949	3,019.6	4,419.4	1,487.0	492	336
1950	2,877.5	4,593.7	1,588.2	552	346
1951	2,980.1	5,274.6	1,680.8	564	319
Percent of change					
1951 vs. 1939	+19.8	+183.1	+54.3	+28.8	45.5
* Represent gross	ton-miles of cars, cont	tents and cabooses	in both freight	and passenger	services.

RRs Said to Favor Modified Compulsory Arbitration

Railroads have reluctantly concluded that present labor laws should be amended to make final and binding the reports of Presidential fact finding boards in disputes concerning rates of pay and rules or working conditions. Daniel P. Loomis, chairman of the Association of Western Railways, said on May 20 in an address to the New York Railroad Club. They also feel that strikes and lockouts in the industry should be outlawed, he added, and that an orderly method of quasijudicial procedure should be written into the law to provide for settlement of disputes not adjusted through negotiation, mediation or voluntary arbitration.

Mr. Loomis said he believed much of the objection to compulsory arbitration by both labor and management might be overcome by limiting the period during which an arbitration award would be effective. "If the award were put into effect for a limited period of time, say six months or a year," he pointed out. "there is a strong possibility that before that period expired both sides would decide the arrangement was all right and neither party would try to upset it. If one of them did, it might only lead to further arbitration without a work stoppage."

tration without a work stoppage."

Another possible advantage to such a plan, he said, was "the probability that arbitrators, knowing their decision would have to be adopted by both sides, would be relieved of the feeling that they must make recommendations that will be accepted by one side or the other." The speaker predicted that adoption of such a form of compulsory arbitration "would result in more, rather than fewer, agreements being made through collective bargaining. If both sides fully realized that they ran the risk of losing something through procedures that would be binding, they would be more willing to do some real

bargaining across the table in an attempt to settle these controversies."

Under the proposal advocated by Mr. Loomis, the President would be given power to require, in an emergency, that a particular dispute be submitted to arbitration, with the decision binding only for a limited period. This, he said, "seems preferable to seizure but falls short of outright general compulsory arbitration. I think it is inescapable that if an industry is so important to the general welfare of the public that a strike cannot be tolerated, then some substitute for the use of economic strength must be adopted."

Citing the experience of the railroads which have been under govern-ment control for 22 months, Mr. Loomis said "government seizure is not a means of settling labor disputes. It is only a means of keeping an essential industry operating until the parties themselves work out a settlement. If government does exert pressure, can anyone be sure it is based on a full consideration of all facts or based on expediency? It was hoped that setting up the emergency board procedure in the Railway Labor Act would eliminate strikes in the railroad industry. It is true that the procedure was not final and binding, but it was thought at the time of enactment that neither side would be inclined to reject recommendations of a board appointed by the President of the United States. But it has not worked out that way. For the last 10 years recommendations of emergency boards have been rejected by the labor organizations representing the operating employees almost as a matter of course.

New York Central, Long Island, Increase Fares

The New York Central on May 19 increased its commutation and school fares by 25 per cent and its 26-trip tickets by an average of about 10 per cent. The new fares had been previously authorized by the New York State Public Service Commission, which was petitioned by the road last October for increases of 30 per cent in commutation and school fares and approximately 24 per cent on the 26-trip tickets. Authorization to increase the fares, the commission said, was based on a finding that the Central had been providing commutation service at a loss. In view of the fact that the impact of the higher fares upon commutation traffic was uncertain, the commission added, it made no estimate of the probable additional yield from the increase authorized.

The Long Island's "penny-a-day" fare increase, authorized by the commission to meet increased costs of wage boosts, went into effect May 14. Application for the increase was made last January. The fare adjustment will bring in about \$560,000 on an annual basis, the road said, just about enough to cover the additional cost in passenger service. One cent was added to the

cost of each single-fare ticket. Unrestricted monthly commutation tickets went up by 32 cents and restricted commutation tickets by 29 cents. Weekly tickets were raised eight cents and 46-trip school tickets by 32 cents. The commission also approved the road's request for authority to discontinue making refunds on additional charges for purchase of certain tickets aboard

"Union Shop" Suit Dismissed as "Premature"

A suit brought in federal district court in Louisville, Ky., which would have been a test of the constitutionality of the so-called union shop amendment to the Railway Labor Act, has been dismissed by the court without prejudice. The suit was brought by three clerks employed by the Louisville & Nashville against the road and against the Brotherhood of Railway Clerks on the grounds that if a union shop agreement was consummated be-Clerks on the grounds that if a "union shop" agreement was consummated between the railroad and the brotherhood. they, and other non-union clerks, would be deprived of "an essential of life, liberty and property without due pro-cess of law" i.e., the right to earn a living at a chosen profession. (Railway Age, February 25. page 16).

By agreement of all parties, the suit was dismissed on the grounds that it had been filed prematurely as no discussions or negotiations between the railroad and the union with regard to a union shop agreement had taken place in Louisville and no such agreement had been adopted.

RR Men Attend Alco Forum On Spectrographic Analysis

Nearly 100 representatives from 50 railroads in all parts of the United States and Canada attended a recent two-day symposium in Schenectady, N.Y., as guests of the American Locomotive Company. Subject of the symposium was use of the spectrograph in analysing diesel engine lubrication oil to detect and prevent serious engine trouble. The chairman was H. R. Sennstrom, Alco research and testing engineer, who gave a description of Alco's own spectrographic work over the past several years.

A. C. Mengel, chief engineer of Alco, opened the symposium with a report on the development of spectrographic methods. A technical account of Alco's present laboratory and field methods was given by L. L. Nathan, Alco chemical engineer

Among railroad representatives favoring continued use of spectrographic analysis for diesel engine maintenance control were: V. E. Amspacher, chief chemist, Pennsylvania; Fay Thomas, assistant to general superintendent of equipment, New York Central; Wade R. Seniff, engineer of tests, Baltimore & Ohio; W. E. Lasky, engineer of



ALCO'S FORUM on spectrographic analysis was well attended.

tests, Gulf, Mobile & Ohio: C. C. Mugford, assistant engineer of tests, Southern Pacific; Stanley Crane, engineer of tests, Southern; W. F. Sinclair, engineer of diesel equipment, Canadian Pacific; and Kenneth Cartwright, general mechanical superintendent, New York, New Haven & Hartford.

Mr. Seniff summarized the general conclusions of the symposium by saying that while spectrographic analysis had already proved itself by progress made during the past year, railroads and manufacturers must capitalize on use of spectrography as a vital tool which brings good dividends if accurately and intelligently used. He proposed, as a resolution, that railroads and manufacturers form a committee, headed by Mr. Amspacher, to determine standard laboratory techniques and tolerances for formal submission to the American Society for Testing Materials, which would then establish spectrographic standards for the railroad and locomotive industries.

Charges for Coach Seat Reservations Approved

Sixteen railroads in the East and South have won Interstate Commerce Commission approval of charges made for reserved coach seats.

The charges range from 25 cents to \$1. They were established on February 1, 1949, and the commission subsequently instituted an investigation into their reasonableness and lawfulness. case was docketed as No. 30171.

The commission found that providing reserved coach seats entails added service and expense to the roads. It also found that, as a rule, the reserved-seat coach trains consist of better equipment, and the separate charges bring in substantial revenues. The charges have the added benefit of reducing the number of "no-shows," while passengers traveling by reserved-seat coaches receive "important advantages.

"The charge has had a highly bene-

ficial effect upon the operation of the trains in promoting a higher load factor, reducing the number of unclaimed reservations, and providing the carriers with more definite information as to the volume of travel to be expected for each run." the commission said.

Average Car Load in '51 Set New All-Time Record

Carload freight originated by Class I railroads in 1951—averaging 42 tons per car-set a new all-time record. It was a ton higher than the previous year, and was 0.4 of a ton higher than the previous record established in 1948.

This was shown in the annual summary prepared by the Car Service Division of the Association of American Railroads, from commodity statistics issued by the Interstate Commerce Commission. The summary was sent recently to A.A.R. member roads by C.S.D. Chairman Arthur H. Gass.

"Although a small part of the increase in average tonnage per car in 1951 over 1950 may be attributed to the fact that the heavy-loading Products of Mines group accounted for a slightly larger proportion of the total traffic in 1951 than in 1950, most of the improvement appears to be the direct result of heavier loading of individual

commodities," Mr. Gass said. Averages for individual commodity classes in 1951 showed increases in 190 classes. There were decreases in 76 classes and five did not change.

Mr. Gass also said that average carrying capacity of freight cars at the end of 1951 was 52.97 tons, an increase of about one-third of a ton over the previous year.

C. & O. Tests Train X

A test coach built for the Chesapeake & Ohio's experimental "Train X" was reportedly tried out early this month at speeds of up to 105 m.p.h. The test run was made between Grand Rapide, Mich., and Grand Ledge, 53 miles, on track which includes a 15-mile tangent between Woodbury and

Grand Ledge.

If results of the run, as recorded by meters and testing equipment within the car, prove successful, the C. & O. will reportedly undertake to promote development of a smaller locomotive, further to reduce operating costs, on design lines in keeping with the coach. The coach itself is said to be about 30 feet long and to stand only about 18 inches above the rails. It is designed for travel at speeds up to 150 m.p.h., and is intended to cut both construction and operating costs as compared with conventional cars.

Protective Section Picks E. S. Glass as Chairman

Edmond S. Glass, chief special agent, Norfolk & Western, Roanoke, Va., has been elected chairman of the Protective Section of the Association of American Railroads. Elected to serve with him during the 1952-53 fiscal year as vice-chairman of the section was T. W. Hamilton, superintendent of police, Pennsylvania, Philadelphia, They were elected at the annual meeting of the



"YOUR NOSEY ATTITUDE and the way you unhesitatingly asked us questions indicates clearly that you have the makings of good investigators," D. L. Wood (above), chief special agent, Illinois Central, told graduates of the 2nd National Railroad Police Academy in Chicago on May 1. A total of 43 men, ranging from patrolmen to chief special agents, completed the intensive 2-week training course, inaugurated last year under auspices of the Protective Section, Association of American Railroads.

Association of American Railroads.

Mr. Wood told the class the section will make a checkup of their performance in the line of duty about eight months after graduation. The checkup will be compared with a similar one made last year on the first graduating class and will be used to formulate plans for future courses. The graduates themselves were unanimous in their approval of the academy but thought next year's course should include more project training.

section in Milwaukee, Wis., on May 6-8. Mr. Glass succeeds H. G. Moxham, chief of police, Boston & Maine, Boston.

"You patrol the longest private police beat on earth—350,000 miles of main lines and yards," John P. Kiley, president of the Milwaukee told members of the section during the annual dinner on May 7. Mr. Kiley expressed concern over the rising rate of trespassing by juveniles on railroad property. While many of these children mean no harm. there is a small percentage "that are a serious menace because of their tendency to do mischief such as throwing stones at passenger trains, obstructing a track with a tie or piece of iron, meddling with switches or even jamming an automatic signal," he said. Air rifles and .22-cal rifles pose another vexing problem, he added, concluding that "coddling a delinquent is a mis-take" and that "treating a child as if he had mature judgment and was responsible for his acts is the wrong way to go at the problem. However, the responsibility lies somewhere—and that somewhere is with the parents.'

Mr. Kiley cited the members of the section for their "fine missionary work in bringing the dangers of trespassing, not only into the homes, but into the

schools of the country."

"The Weary Willie who rode the blinds of passenger trains or the rods of freight trains in the old days was a nuisance but he wasn't as hard to handle as the juveniles of the more malicious type today." Mr. Kiley said.

malicious type today," Mr. Kiley said.
Paul E. Feucht, executive vice-president, Chicago & North Western, echoing Mr. Kiley's concern over the juvenile problem, suggested that conducted tours for school groups, Boy Scouts and other youth organizations through yards and other railroad facilities might satisfy much of the curiosity of young people who might otherwise do their railroad exploring alone and without guidance. He added that railroad police, by close cooperation with municipal, state and federal law enforcement officers, could do much to strengthen the railroad industry's community relations.

Among other speakers on the program were C. S. Pope, vice-president, Soo Line; Major General E. P. Parker, provost marshall general of the Department of the Army; and S. F. Lynch, general manager, Illinois Central.

Freight Car Loadings

Loadings of revenue freight in the week ended May 17 totaled 754,373 cars, the Association of American Railroads announced on May 22. This was an increase of 34,580 cars, or 4.8 per cent, compared with the previous week; a decrease of 55,102 cars, or 6.8 per cent, compared with the corresponding week last year; and an increase of 11,060 cars, or 1.5 per cent, compared with the equivalent 1950 week.

Loadings of revenue freight for the week ended May 10 totaled 719.793

cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS

For the wee	k ended Sc	iturday May	10
District	1952	1951	1950
Eastern	123,138 143,277 52,620 124,047 115,303	140,974 167,676 61,645 130,972 128,790	123,122 135,178 59,209 117,372 109,930
Central Western Southwestern	105,429 55,979	118,663 59,407	110,145 56,833
Total Western Districts	276,711	306,860	276,908
Total All Roads	719,793	808,127	711,789
Commodities: Grain and grain			
products	41,148	45,132 8,135	38,491 8,034
Coal	114,244	132,999	140,335
Forest products . Ore	39,566 75,503	48,514 82,892	42,218 55,418
Merchandise I.c.I. Miscellaneous	72,186 356,929	77,102 397,178	76,404 337,834
May 10 May 3 April 26	719,7°3 744,59°2 779,402	803,127 803,337 824,662	711,789 743,996 745,295
April 19 April 12	735,097 690,660	810,022 777,989	722,688 707,385
		-	-

Cumulative total 19 weeks13,714,753 14,257,618 12,455,207

In Canada.—Car loadings for the seven-day period ended May 7 totaled 80,631 cars, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
otals for Canada: May 7 1952	80,631	34,240
umulative Totals	1 385 084	64R 750

Jobless Pay Liberalizer Approved by President

President Truman has signed the bill designed to liberalize benefit provisions of the Railroad Unemployment Insurance Act. The bill. S. 2639, was recently passed by Congress, where it was supported by the so-called "standard railway labor organizations." The railroads opposed the legislation at committee hearings held last March. (Railway Age, May 5, page 13, and May 12, page 77). Sponsors of the legislation said more liberal benefit payments were necessary to meet rises in the cost of living.

Roads Request Probe Of Coal Rates in Ohio

Twenty-one railroads in Ohio have asked the Interstate Commerce Commission to institute an investigation into the level of intrastate rates on bituminous coal in that state.

In a May 20 petition to the commission, the roads said the Ohio Public Utility Commission has authorized the full Ex Parte 175 increases on all commodities except coal. The state commission, which previously refused to permit increases on coal, has agreed to hold hearings June 24 on the coal rates. But the roads say they need relief "immediately."

Failure of the P.U.C. to authorize higher rates on coal is costing the Ohio roads about \$250,000 a month, the roads told the I.C.C. The increase

in interstate coal rates approved by the I.C.C. in Ex Parte 175 was 12 per cent, subject to a maximum of 40 cents a net ton.

Wabash Improvements To Cost \$17,000,000

The Wabash's 1952 program for property improvements will involve expenditure of about \$17,000,000, Arthur K. Atkinson, president, said at the recent annual meeting of stockholders in St. Louis. Of the total, he added, \$5,000,000 will be for roadway improvements and \$12,000,000 for new equipment and improvements to existing equipment. New equipment received, or to be received, this year, includes 30 diesel units, 771 freight-train cars and an additional dome-type parlor car for the St. Louis-Chicago "Bluebird."

S.P. Leasing Land For Oil Development

The Southern Pacific's policy toward its ownership of more than 4,000,000 acres of land is not to sell, but to hold it for management and income, D. J. Russell, president, told stockholders at the annual meeting in Wilmington, Del., on May 14.

Mr. Russell said some of the company's land was in oil-producing territory and that while the company is not developing its oil and gas lands. some 38,000 acres are currently leased for such development. He said production is actually coming from 900 acres. Together with oil and gas income from leases on rights of way and industrial real estate, and from certain oil rights in Texas and Louisiana, the S.P.'s annual income from oil and gas royalities and rentals of the past five

years totaled \$1.9 million, he said. Mr. Russell also reported the movement of iron ore to Japan from previously little-developed mines in central Nevada.

Storm fighting has added \$3 million to the company's operating costs this year, the S.P. president said. Despite greater highway and air competition, the company's passenger business has grown at a rate exceeding the growth of population in the eight-state area served by the road, he concluded. Pennsylvania, Philadelphia. They were elected at the annual meeting of the

Fowler Confirmed As New D.P.A. Chief

The Senate last week confirmed the appointment of Henry H. Fowler as Defense Production Administrator. Mr. Fowler, present head of the National Production Authority, will continue to hold that post also.

Manly Fleischmann, who headed D.P.A. under Defense Mobilizer Charles E. Wilson, has resigned effective May 31. Mr. Fleischmann at one time was chief of the N.P.A., and has been associated with the various "controls" agencies since their beginning in 1950.

Seder Is New Accounting Vice-President of A.A.R.

Arthur R. Seder, vice-president of the Chicago & North Western, has been elected vice-president in charge of the Finance, Accounting, Taxation and Valuation Department of the Association of American Railroads. The appointment was announced May 23 by A.A.R. President William T. Faricy.

Mr. Seder, who succeeds Edward H. Bunnell, will assume his new position on June 1. Mr. Bunnell retired February 29 under the pension plan of the

CAR SURPLUSES, SHORTAGES

Average daily freight car surpluses and shortages for the week ended May 17 were announced by the Association of American Railroads on May 22 as follows:

Su	rplus Shortage
Plain Box	10,351 842
Auto Box	218 0
Total Box	10,569 842
Gondola	1,532 552
Hopper	1,518 301
Covered Hopper	10 42
Stock	2,183 6
Flat	9 522
Refrigerator	7.919 47
Other	508 0
Total	24,248 2,312

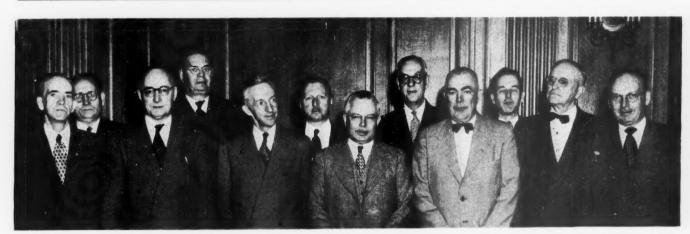
A.A.R. after 52 years of railroad service

The new A.A.R. vice-president was also vice-president and comptroller of the Chicago, St. Paul, Minneapolis & Omaha, and has served as director of the Indiana Harbor Belt, the Minneapolis Eastern, and various subsidiaries of the C. & N.W.

Born in Minneapolis on September 25, 1889, Mr. Seder is the son of the Rev. and Mrs. James I. Seder. When four months old, he was taken to Japan by his missionary parents and lived there for the following six years.

A graduate of the University of New Mexico, Mr. Seder was principal of the Carlsbad, N. M., high school from 1911 to 1913, and principal of the Clovis, N. M., high school from 1913 to 1918.

He entered railroad service in 1918. Since that time he has served con-



A CAREFUL CAR HANDLING FORUM featured the recent meeting of the Northwestern Claim Conference in Winnipeg, Man. The meeting of the conference was attended by more than 200 shippers and railroad representatives. F. M. Wilson (center, front row), assistant to chairman, Association of Western Railroads, led the discussion. Others taking part were, left to right, front row: A. S. Moffat, freight claim agent, Canadian National; H. A. Stimpson, superintendent of traffic, United Grain Growers; C. E. Lister, acting general manager, Prairie region, Canadian Pacific; Mr. Wilson; F. H. Keefe,

general manager, Western region, C.N.; Lewis Pilcher, vice-chairman, Freight Claim Division, Association of American Railroads; G. P. Connolly, auditor of claims, C.P.; (back row): E. O. Melin, chairman of the conference and district freight claim agent, Chicago, St. Paul, Minneapolis & Omaha; J. V. Ingram, supervisor of safety, loss and damage prevention, C.N.; F. L. Guertin, general supervisor of safety, loss and damage prevention, C.P.; J. L. Knight, general superintendent of the Midland of Manitoba; and W. J. Murphy, freight claim agent, C.P.

DISTRIBUTION OF RAIL FREIGHT RATE INCREASES BY COMMODITY GROUPS AND REGIONS:

Estimated over-all average percentage increases in freight rates authorized since June 30, 1946

		Commodity group	United States	Eastern district	Pocahontas region	Southern region	Western district
v	111	Products of agriculture	66.4 84.4 61.4 84.5	71.8 90.7 63.1 90.7	73.7 90.9 61.4 90.8	69.1 85.6 63.9 88.8	63.9 78.9 56.4 80.9
		including forwarder traffic Less-carload traffic Total, all commodities	88.9 91.6 78.9	97.3 99.9 83.4	97.0 99.9 76.2	87.1 89.1 79.6	80.6 81.6 73.6

¹ Does not include effect of extra authorizations for Western trunk-line Zone I except as shown on last line.

From May 14, 1952, issue of "Monthly Comment," published by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

tinuously with C. & N.W. system companies, first as bookkeeper and accountant on the Omaha, then as general accountant, auditor of disbursements, general auditor and comptroller. In 1945, Mr. Seder was elected vicepresident and comptroller of that railroad. From 1938 to 1940. Mr. Seder was also assistant comptroller of the C. & N.W. and then was promoted to general auditor, a position he held until 1945, when he was elected vicepresident of that road.

Mr. Seder has been a lecturer at the Midwest School of Banking of the University of Wisconsin and for the past six years has been a member of the general committee of the A.A.R. Accounting Division and a member of the Railway Express Contract Accounting Committee. He also is president of the board of trustees of Garrett Biblical Institute in Evanston, Ill., and chairman of the Association of North Central College in Naperville, Ill. He is a member of several clubs, including the

Controller's Institute of America. A photograph of Mr. Seder appears on page 10.

Amortization Certificates

Certificates of necessity for accelerated tax amortization of facilities were awarded to the Seaboard Air Line and the Erie in the period from April 25 through May 1, the Defense Production Administration has announced.

The S.A.L. was authorized to apply accelerated amortization to 55 per cent of expenditures totaling \$5,087,955, and the Erie was authorized fast write-off of 70 per cent of \$676,510.

M.W. Clement Honored By Treasury Department

Martin W. Clement, chairman of the Pennsylvania, has been presented with a medal and citation by the U.S. Treasury Department in recognition of distinguished service as a volunteer leader in the Savings Bond program. Since April 1950 Mr. Clement has been chairman of the National Payroll Advisory Committee of 27 industrial and business leaders who have worked to expand the payroll plan for regular purchase of the bonds.

In making the presentation to Mr.

Clement, Secretary of the Treasury John W. Snyder said the medal and citation were to be "a constant reminder of the deep feeling of appreciation the people of the Treasury Department have for your wonderful leadership in the Defense bonds program of the nation. You have done a tremendous work of stimulation and promotion in many areas of industry and business."

ORGANIZATIONS

Three Railroad Sessions at A.S.M.E. Spring Meeting

Three railroad sessions are scheduled during the semiannual meeting of the American Society of Mechanical Engineers, to be held at the Hotel Sheraton-Gibson, Cincinnati, June 15-19, inclusive. The program for these sessions is as follows.

Tuesday, June 17 2:30 p.m. Railroad I

A Method of Establishing and Comparing Ton-nage Ratings of Diesel Locomotives, by E. H. Weston, assistant chief mechanical engineer, Chi-cago & North Western.

WEDNESDAY, JUNE 18 9:30 a.m. RAILROAD II

Effect of Impact on Freight Operation Loss and Damage, by W. A. Murphy, freight claim agent, New York, Chicago & St. Louis.
Development in Metallic Friction Draft Gears, by N. T. Olsen, vice-president, Peerless Equipment

Company.

Development in Rubber Draft Gears, by A. M. Bixby, vice-president, Waugh Equipment Company. 2:30 p.m. RAILROAD III

Development in Cushioned Underframes, by W. K. Durbon, vice-president, Hulson Company.

Dynamic Testing of Freight Cars, by J. M.
Roehm, Pullman-Standard Car Manufacturing Com-

Kiley Address to Open Accounting Meeting

J. P. Kiley, president of the Chicago, Milwaukee, St. Paul & Pacific, will deliver the principal opening-day address at the 58th annual meeting of the Accounting Division, Association of American Railroads. The meeting will be held in Detroit, Mich., at the Sheraton-Cadillac Hotel from June 10 through June 13.

Another railroad chief executive-President S. P. Ruddiman of the Detroit, Toledo & Ironton-will make an opening-session talk, greeting the delegates. Leo T. Crowley, board chairman of the C.M.St.P.&P., is scheduled to make some "informal remarks" the first

Subsequent addresses will be de-livered by Dr. Pierre R. Bretey, editor of the "Analysts Journal," and by Claude W. Dudley of the law firm of Dudley, Algire, Jones and Ostmann. The division chairman, J. W. Severs, vice-president of the C.M.St.P&P., will address the delegates at the closing-day session

Chairman Severs will preside at the meeting, other proceedings of which will include reports of the division's various standing committees. The program for June 10 calls for the usual "open house" meetings of all standing committees, and the convention will assemble formally at the morning session on June 11.

The American Association of Baggage Traffic Managers will hold its 84th annual meeting on June 3-5 at the Antlers Hotel, Colorado Springs, Colo.

The Trans-Missouri-Kansas Shippers Board will hold its 93rd regular meeting in the Broadview Hotel. Wichita, Kan., on June 11-12.

The 30th annual meeting of the Central Western Shippers Advisory Board will be held on June 17 and 18 at Zion Lodge, Zion National Park, Utah. James K. Knudson, defense transport administrator, will be guest speaker.

A fantasy entitled "A Traffic Manager's Dream" will be presented at the fifth annual "Transportation Gridiron Dinner" sponsored jointly by the Texas Industrial Traffic League, the Industrial Traffic Managers' Association of Dallas, and the railroads and motor carriers of Texas. The show will be presented in the Crystal ballroom of the Baker Hotel, Dallas, on June 3.

W. A. Kluender, forestry and agricultural agent for the Chicago & North Western System, has been elected president of the American Railway Development Association. Other new officers of the association are: First vice-president, E. L. Beardsley, director (Continued on page 58)

MORE NEWS ON PAGES 58-65

Additional news appears on pages 58-65, with regular news departments beginning on the following pages:

Supply	Tr	a	de													58
Financia	1			۰												59
Equipme	ent		an	d		S	u	p	p	ı	ie	8				62
Railway	0	fl	fice	er	8											62



The Western Maryland, aided by Alco-GE motive power, saved nearly two million dollars in operating costs during the past two years through dieselization.

This month, as the Western Maryland marks its centennial of dependable service, diesel-electrics haul 35% of its freight ton miles, and handle 98% of its yard switching. Last year, the railroad completed a program begun in 1949 for dieselizing all freight and switching operations east of Hagerstown, Md.

Powerful, versatile Alco-GE locomotives are among those carrying the proud, red-and-gold medallion of the Western Maryland's famed "fast freights"... typifying the modern methods and equipment now helping to win ever greater tonnages to the rails.





REVENUES AND EXPENSES OF RAILWAYS (Dollar figures are stated in thousands; i.e., with last three digits omitted) MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1952

					(One	rating Ex	The state of the s										
Name of Road	Average mileage operated during	Freight	Operating Pass.	Operating Revenues Total (ir	Mair ucs (inc. misc.)	.=	3	Depress, and Retire- ments	Neint. Total 1952	Equipme I Total 1951	Deprec. and Retire- ments	Traffic po	Trans- portation	Total 1952	(=	Operating ratio 952	[=	Net from Rarailway	Railway tax ope	Net railw rating inc	way Icome 1951
Akron, Canton & Youngstown March Atchison, Topeka & Santa Fe March Atlanta & St. Andrews Bay March 3 mos.	171 171 13,073 13,073 82 82	_	4,504 13,701 1	477 1,424 48,720 143,405 1959	1,372 50,016 136,470 877	212 6,663 18,923	67 193 6,915 18,777 103	6 17 646 1,988 7	54 174 9,332 26,508 22 64	26,112 19 26,112 19	16 47 1,670 4,987 11		138 424 5,318 15,920 10 194	336 1,007 4,581 33 0,995 94 440	313 913 98,348 140	#1-0486	63.7 66.5 770.4 722.1 49.5 46.3		-	68 179 5,878 6,7,480 163	69 173 095 138
Atlanta & West PointMarch Western of Alabama	93 133 133 133 133 133 133 133 133 133 1	288 892 330 866 164 491	42 154 39 150	381 1,198 412 1,139 1,66 499	398 1,146 417 1,206 158 451	47 138 47 145 160 115	145 145 67 188 28 84	150 E	181 67 195 11 33	55 160 59 173 8	1481824	16 16 16 48 11 34	161 466 148 425 50 154	309 906 301 881 124 371	320 919 306 909 117 330	81.2 75.7 77.3 74.5	80.5 73.4 74.5 73.1	292 1112 258 422 128	39 161 67 159 10	1284 1884 1844 1844	20 48 114 15 15
Atlantic Coast Line	5,472 5,472 343 6,187	13,077 36,806 543 1,640 34,009 98,971	2,564 7,455 5 1,823 6,132	16,869 47,908 565 1,705 38,180 112,256	14,686 42,141 558 1,568 38,672 105,183	2,218 6,488 132 409 5,038 14,608	3,432 9,521 171 375 4,935	133 392 4 11 1,231 2	2,662 7,901 105 321 8,249 24,511	2,661 7,462 87 87 8,801 24,295	1,576 39 113 978 2,902	371 1719 17 51 51 905 1 2,601	5,233 1 15,457 3 174 508 14,801 3	32,978 3 1,324 39 1,324 3 30,481 3	35,323 425 1,146 31,535 87,893	66.1 68.8 77.7 79.8 80.9	84.7 756.2 776.2 83.6 83.6	5,716 14,930 126 381 7,699 21,431	3,450 9,700 50 165 3,056 8,222	1,935 4,156 65 193 3,944	726 1.719 62 205 3,320 7,941
Staten Island Rapid Transit March Bangor & Arostook Amos Bessemer & Lake Erie March 3 mos.	29 0 29 0 602 0 602 0 212	249 763 1,592 4,478 1,461 4,203	50 150 35 116 2	302 923 1,680 4,757 1,486 4,273	299 871 1,279 3,247 1,679 4,358	51 150 250 720 242 581	58 152 186 523 184 505	35 19 51 17 49	35 115 247 731 605 1,874	36 110 179 482 364 1,736	18 72 196 96 287	148158 186 186 186	147 443 430 1,271 436 1,293	265 799 1.009 2,965 1,396 4,089	287 794 717 2,040 1,119 3,862	87.8 64.4 62.3 94.0	95.8 91.2 56.1 66.6 88.6	37 124 671 1,792 184	36 109 313 849 175 484	24 311 764 373	38 215 215 489 537 678
Boston & Maine	1,701 1,701 1,701 1,35 1,234 1,234	5,906 16,931 156 488 858 2,387	896 2,841 47 171	7,606 22,124 156 488 932 2,642	7,564 21,749 163 456 797 2,322	1,252 3,998 15 47 93 314	1,217 3,605 13 34 85 256	177 530 1 2 5	1,140 3,376 80 253 126 401	1,248 3,544 84 251 113 295	165 498 16 49 8 25	340	3,259 9,812 27 83 329 935	6,067 18,510 137 409 567 1,713	6,189 17,957 132 397 493 1,389	79.8 83.7 87.9 83.9 60.9 64.8	81.8 82.6 80.8 87.1 61.8	1,539 3,614 19 79 364 929	688 1,739 74 225 30 93	496 836 55 173 235 538	403 774 74 199 202 613
Canadian Pacific Lines in Vermont. March 3 mos. Central of Georgia	90 h 1,786 h 1,786 h 411 h 411	196 581 3,174 9,318 2,785 8,408	16 44 236 728 471 1,347	234 685 3,805 11,169 3,555 10,681	196 649 4,025 11,285 3,635 10,500	185 630 1,772 416 1,393	55 144 846 2,045 454 1,406	11 42 130 73 214	29 101 613 1,787 657 1,931	28 87 655 1,846 693 1,950	102 307 822 248	134 134 392 59 176	118 363 1,565 4,641 1,880 5,427	209 691 3,151 9,199 3,178 9,529	223 611 3,444 9,547 3,273 9,588	89.5 100.9 82.8 82.4 89.4 89.2	113.4 94.1 85.6 84.6 90.0	25 654 1,971 377 1,152	13 39 309 1,016 417 1,244	44 252 703 392 1,227	-98 -165 114 440 -401 1,382
Central of Pennsylvania	h 207 h 207 h 422 h 5,117 h 5,117	1,636 4,916 831 2,426 28,601 85,443	17 52 193 613 2,018	1,693 5,091 951 2,807 30,503 91,346	1,547 4,564 1,011 2,700 29,921 82,986	181 479 175 479 4,169	149 481 147 415 3,913 11,174	15 45 25 56 313 1,014	374 1,120 162 504 6,171 18,798	378 1,216 145 464 5,678 15,653	215 12 12 37 1,379 4,097	26 77 16 47 636 1,787	494 1,473 418 1,291 9,890	1,116 3,276 819 2,452 22,083 66,538	1,098 3,400 751 2,217 21,662 60,762	65.9 64.3 86.1 72.4 72.8	70.9 74.5 74.3 82.1 72.4	5777 1.815 132 355 8,419 24,807	127 315 38 131 4,451 12,718	2,308 2,308 4,532 3,355	656 1,831 173 185 3,938 0,546
Chicago & Pastern Illinois March Chicago & Illinois Midland March Therefore Sanos Chicago & North Western March 3 mos.	h 868 1. 868 h 130 h 7,915 h 7,915	2,351 7,032 685 1,911 11,905 36,482	234 786 i 1,731 5,294	2.909 8.808 699 1.960 15.625	2,846 8,202 808 2,314 16,546 46,102	352 1,005 95 2,725 7,338	356 1,043 100 297 2,677 6,873	27 79 10 24 317 1,004	470 1,302 193 579 3,339 9,695	368 1,163 165 466 3,240 9,188	120 347 21 62 745 2,233	342 342 27 91 349 1,035	1,050 3,212 209 630 7,831	-4	2,071 6,093 558 1,600 15,089 42,321	74.4 72.6 80.6 85.9 96.7 93.1	72.7 74.3 69.0 69.1 91.2	2,412 135 276 276 523 3,291	306 1,022 72 158 1,058 3,167	361 1,130 36 53 829 941	326 872 111 326 114 613
Chicago, Burlington & QuincyMarch Simos. Chicago Great WesternMarch March Chicago, Indianapolis & Louisville. 3 mos.	h 8,792 1. 8,814 h 1,474 1. 1,474 h 541	16,631 51,684 2,762 8,207 1,751 4,841	1,469 4,522 10 10 44 66 206	20,352 62,546 2,969 8,800 1,930 5,392	23,378 64,575 2,900 8,500 1,887 5,326	2,563 7,084 450 1,352 316 952	2,512 6,613 463 1,276 308 889	551 1,243 74 48 23 61	3,257 10,444 446 1,286 242 740	3,241 9,499 441 1,182 287 821	695 2,086 119 353 63 189	465 1,408 102 304 93 258	7,469 22,880 970 2,900 638 1,872	14,548 1 44,284 4 2,069 6,068 1,385 4,099	15,027 42,984 2,119 5,932 1,446 4,121	71.5 70.8 69.6 69.0 71.8 76.0	64.3 66.6 73.1 69.8 76.7	5,804 18,263 900 2,732 1,293	3,170 9,994 343 962 238 524	2,307 7,084 316 952 213 460	3,743 9,367 185 797 151 401
Chicago, Milw., St. Paul & Pacific March 3 mos. Chicago, Rock Island & Pacific March 3 mos. Chic., St. Paul, Minn. & Omaha 3 mos. 3 mos.	h 10,671 1. 10,671 h 7,916 3. 7,916 h 1,617 1,617	17,623 52,878 14,226 42,520 2,236 7,025	1,440 4,633 1,592 5,117 170 551	21,321 64,030 17,331 52,204 2,662 8,336	22,156 61,314 17,432 49,885 2,564 7,638	2,950 8,332 2,182 5,955 434 1,161	2,642 7,485 2,067 5,422 5,10 1,118	393 1,137 242 723 41 134	4,665 14,091 3,021 8,780 415 1,315	4,550 12,603 2,861 7,896 439 1,291	2,850 506 1,437 265	500 1,384 493 1,478 66 198	9,242 27,892 6,577 19,743 1,511 4,527	18,383 54,827 13,097 38,407 2,559 7,596	18,612 52,429 13,114 36,903 2,684 7,437	86.2 85.6 75.6 73.6 96.1	84.0 85.5 75.2 74.0 104.7	2,938 9,204 4,235 13,797 104 740	1,712 5,237 1,853 6,113 187 563	2,843 1,684 5,558 -290	1,046 2,207 1,530 4,547 469 824
Clinchfield 3 mos.	s. 317	1,975 6,181	-6	1,987	2,106	241	280	18	308 985	322 952	81 245	122	1,439	3,439	1,166	55.53	55.3 52.6	2,777	213	746 2,489	886 2,815

REVENUES AND EXPENSES OF RAILWAYS (Dollar figures are stated in thousands, i.e., with last three digits omitted) MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1952

y 9951 139 363 33 33 131										1 01000
railway ng incom 52 195 4 13 7 21 7 21 2 58	15 52 557 1,687 170 11,311	2,755 2,755 34 65 92 256	294 965 —1,931 —4,629 18	82 135 219 863 1,745 4,659	1,498 172 172 492 24 28	1,128 2,264 2,264 —56 —205 —315 —679	79 186 787 2,134 5,946 9,832	81 195 711 1,990 169 189	279 40 130 94 94 352	2,235 2,235 883 -2,270
Net rai perating 1952 144 397 307 886 32	18 37 758 1,788 845 2,409	2,480 17 42 126 334	301 721 721 -5,243 -5,243 62	147 399 363 729 1,942 5,281	713 2,061 173 481 26 41	634 1,143 —63 —289 487 —399	105 105 923 2,581 2,471 6,655	68 155 678 2,034 111 361	-116 -352 42 116 130 329	1,017 3,030 3,030 -2,536
tailway tax ol 235 649 265 780 68 180	36 74 726 1,886 914 2,582	1,178 3,089 26 56 148 394	359 875 113 335 27	54 146 870 2,025 2,034 5,760	510 1,506 40 119 19 54	289 864 24 71 1,515 4,516	48 160 1,080 3,148 3,966 10,568	257 257 886 2,638 153 497	28 83 43 105 127 321	2,841 466 1,456
Net from R railway peration 4 402 1,108 685 1,982 101	50 99 1,402 3,478 1,736 4,925	2,130 5,640 37 85 376 1,030	695 1,713 -1,597 -5,034 105 251	320 828 1,714 4,485 4,376 12,154	1,440 4,180 190 540 66	2,756 2,756 10 92 2,367 4,906	2,296 6,730 6,936 18,646	178 453 1,757 5,343 300 967	297 102 275 185 477	2,007 5,936 365 403
00.3 00.3 0.3 0.3	81.1 79.6 75.3 74.9 82.4 81.7	68.3 68.6 53.9 64.1 51.1	60.1 55.2 672.6 375.2 80.0	66.0 71.4 65.5 64.0 72.0 73.6	71.8 69.4 76.6 76.3 78.2 78.2	72.4 75.6 97.1 102.2 92.8 92.0	57.8 63.3 73.4 73.9 77.0	79.6 80.8 56.1 55.1 36.5	171.4 214.5 62.1 60.0 76.0 67.8	80.2 78.1 102.6 100.0
Operation 1952 70.5 71.2 65.8 65.9 65.3 67.8	72.4 80.6 72.3 76.5 77.8	67.4 70.3 75.8 80.1 50.0	58.5 65.6 380.5 441.5 84.2 86.6	60.2 61.3 64.0 67.1 71.8 73.0	63.8 63.9 77.5 78.0 78.0 81.2	77.3 81.0 96.4 111.7 86.7 90.3	69.6 69.6 69.8 70.2 73.1 75.5	882.3 884.2 556.6 50.1 477.4	224.0 247.1 63.8 66.3 69.9 73.0	70.4 70.6 91.4 103.3
Total – 1951 – 912 – 912 – 912 – 1,291 – 1,291 – 163 – 488	148 425 3,710 10,846 6,093 17,253	4,122 12,161 113 326 371 1,082	1,045 2,877 2,359 6,358 507 1,548	370 998 3,015 8,271 111,090 32,122	2,402 6,446 628 1,838 235 692	4,192 11,405 243 742 14,766 42,163	226 698 5,339 15,703 19,710 56,053	2,234 2,234 6,208 6,208 665	156 463 175 490 442 1,262	5,022 14,478 4,044 11,513
Total 1952 958 2,742 1,320 4,004 190 583	132 414 3,651 11,328 6,097 18,139	4,404 13,332 117 342 376 1,113	982 3,263 2,167 6,508 556 1,627	484 1,308 3,048 9,131 11,167 32,808	2,537 7,401 653 1,915 682	3,908 11,722 272 883 15,484 45,520	216 655 5,305 15,820 18,868 57,389	2,423 2,295 6,659 873	171 499 179 540 429 1,288	44250 3,877 12,692
Trans- oortation 497 1,431 684 2,110 113	51 150 1,871 5,728 3,443	2,135 6,425 38 114 209 620	1,267 705 2,068 244 714	307 815 1,752 5,311 6,156 18,257	1,338 3,865 340 999 84 249	2,189 6,520 139 440 7,078 21,085	84 257 2,187 6,582 9,271 28,406	1,228 1,146 1,146 3,467 126 389	47 142 86 259 178 539	2,606 7,657 2,284 7,918
Traffic p 29 85 52 162 2	12 78 243 165 494	173 520 4 12 14 42	87 87 22 71 71	15 15 33 97 357 1,079	222 34 98 18	76 221 3 8 424 1,150	21 64 252 761 493 1,496	120 86 258 25 79	13 12 35 35 35	142 426 10 36
nt Deprec. And And 35 105 32 32 93 26	6 17 138 432 292 871	229 678 8 23 17 51	200 200 78 233 20 60	2 6 101 298 463 1,367	228 228 26 77 22	91 272 630 1,870	14 43 246 721 730 2,184	35 101 90 251 122 25	33 9 26 38 109	202 607 118 353
Equipme Total 1951 186 545 256 688 698	26 85 966 2,907 1,429 3,951	1,080 3,312 22 62 61 61 166	315 781 798 2,139 109 334	75 194 769 1,977 2,226 6,558	536 1,375 120 367 33 97	921 2,613 48 138 3,456	31 113 1,405 4,056 4,637 13,105	157 432 530 1,326 125 104	151 27 77 116 339	1,199 3,409 905 2,481
Maint. Total 1952 215 649 260 733 43	30 93 960 3,095 1,435 4,295	1,124 3,476 20 58 65 186	283 1,200 741 2,123 151 442	80 248 685 2,148 2,354 6,739	1,566 126 374 33 98	828 2,559 48 179 3,926 11,502	35 106 1,250 3,859 4,324 13,041	166 475 430 1,320 120	66 194 28 89 133 386	1,075 3,185 771 2,336
Deprectand and and ments ments 30 100 120 122 120 120 120 120 120 120 12	4 11 51 171 134 387	282 260 3 6 8	26 86 53 172 9	12 27 73 225 676	41 122 9 25 4 11	50 149 9 27 308 895	156 156 285 348 1,042	26 779 90 90 17	28 27 19 19	103 312 86 257
Total 1951 160 414 205 651 15	45 119 570 1,557 2,132	1,720 1,720 40 120 76 220	211 541 743 1,871 103 287	74 186 419 1,096 1,586 4,570	343 1,041 127 349 80 243	611 1,671 52 147 3,282 9,033	75 223 1,141 3,275 4,028 11,029	140 405 389 1,098 114	119 119 110 118 241	818 2,223 601 1,728
Int. Way Total 1952 158 400 232 707 29	29 101 538 1,654 789 2,273	681 2,058 43 129 75 226	184 540 588 1,934 117 340	85 210 421 1,114 1,638 4,745	368 1,081 117 332 86 240	639 1,908 64 198 3,267 9,364	61 1,278 3,592 3,788 11,396	151 443 503 1,254 212	46 127 41 120 73 220	2,228 647 1,891
06. misc.) 1951 1,312 3,737 1,851 5,167 265 808	182 534 4,926 14,485 7,395 21,130	6,038 17,732 209 508 726 2,094	1,740 5,209 351 1,695 633 1,922	562 1,413 4,602 12,920 15,398 43,634	3 347 9,284 819 2,408 301 878	5,789 15,078 250 726 15,911 45,817	391 1,103 7,271 21,241 25,607 72,569	1,001 2,765 3,942 11,273 605 1,666	216 216 281 816 582 1,861	6,261 18,529 3,943 11,508
l 1952 1,360 3,851 2,004 5,987 291 860	183 5,053 14,806 7,833 23,064	6,534 18,972 154 427 752 2,143	1,677 4,975 569 1,474 660 1,878	803 2,136 4,761 13,616 15,544 44,963	3,977 11,581 843 2,455 301 840	5,053 14,478 282 791 17,852 50,425	310 940 7,601 22,550 25,804 76,035	1,004 2,876 4,052 12,002 601 1,840	202 202 281 815 613 1,765	6,778 20,186 4,243 12,289
Pass. 76 259 138 470	164 513 807 2,434	256 780	: 1 2 1 2 1 1 1 1	1 3 568 1,834	986 3 072 35 115	197 630 4 16 1,078 3,344	378 1,226 1,846 5,787	232 144 453 453 2		312 1,033 2,864 8,296
Opp. 1.142 3.207 1.695 5,002 1.75 528	176 492 4,710 13,797 6,257 18,366	6,086 17,513 149 411 736 2,117	$^{1,558}_{4,707}$ $^{522}_{1,329}$ $^{623}_{1,774}$	796 2,113 3,881 10,961 13,814 39,774	2,630 7,447 737 2,144 296 25	4,456 12,753 220 640 15,482 43,343	303 912 6,743 19,824 21,238 62,523	833 2,345 3,558 10,547 595 1,823	70 1187 280 814 608 1,748	6,119 18,079 1,115 3,194
(168 168 793 793 964	2,333 2,333 2,333 2,333 5,00 5,00 5,00 5,00 5,00 5,00 5,00	464 464 567 567 539 539	175 175 236 2,242 2,242	571 571 321 321 360 360	952 952 172 172 8,314 8,314	224 2,878 2,878 6,539 6,539	462 462 891 891 327	156 156 96 96 184 184	1,220 1,220 365 365
m m m op	3 mos. 3 mos. 3 mos. 3 mos. 3 mos. srn. March 3 mos.	March 3 mos. 3 mos. March 3 mos. 3 mos.	March 3 mos. March 3 mos. March 3 mos.	March 3 mos. March 3 mos. March 3 mos.	March 3 mos. March 3 mos. March 3 mos.	March 3 mos. clMarch 3 mos. March 3 mos.	March 3 mos. March 3 mos. March 3 mos.	March 3 mos. March 3 mos. March 3 mos.	March 3 mos. March 3 mos. March 3 mos.	March 3 mos. March 3 mos.
Name of road Colorado & Southern Ft. Worth & Denver Colorado & Wyoming	Columbus & Greenville Delaware & Hudson Delaware, Lackawanna & Wester	Denver & Rio Grande Western . Detroit & Mackinsc Detroit & Toledo Shore Line	Detroit, Toledo & Ironton Duluth, Missabe & Iron Range Duluth, South Shore & Atlantic	Duluth, Winnipeg & Pacific Elgin, Joliet & Eastern Erie	Florida East CoastGeorgia Railroad	Grand Trunk Western Can. Natl. Lines in New Engl Great Northern	Green Bay & Western Gulf, Mobile & Ohio	Illinois Terminal. Kansas City Southern. Kansas, Oklahoma & Gulf	Lake Superior & Ishpeming Lehigh & Hudson River Lehigh & New England	Long Island
	Poperate	Participa	Participa Part	Participa Part	March Period Marc	Marcia Parish P	Particle Particle	Marcia M	Minch	Comparison Com

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YEAR AFTER YEAR, one Exide-Ironclad improvement has followed another. It is a record of continuing progress...a steady flow of storage battery developments that have made Exide-Ironclad YOUR BEST POWER BUY AT ANY PRICE.

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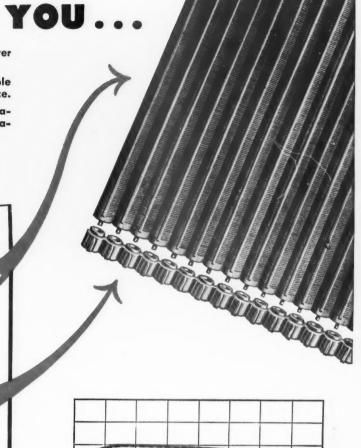
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the long-life grids now contain SILVIUM—an alloy of silver, lead and other components—which make them highly corrosion resistant. Top conducting bar is heavier.

... with the New Polyethylene insulating tube sealer

An insulating sealer for the bottom of the tubes. Acid-proof, non-corroding plastic it fits snugly into slotted tubes of positive plate, and reduces loss of active material. Even the small sediment deposit of the past is reduced 50%. Thus, more active material remains available, and the high battery capacity is sustained for longer working life. (See chart at right.)



PERMANIZED NEGATIVE PLATES

Improved processing, a result of Exide Quality Control assures uniform plates with higher electrical efficiency. These negatives, teamed with the improved positive plates, give you a well-balanced combination for hard service and long life.

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Through the cooperative efforts of Exide Laboratories and the Franklin Institute, a new homogeneous compound was developed. It makes a permanent seal between the jar and cover, resisting shock without cracking in high or low temperatures.

SEAMLESS SHOCK-PROOF JAR

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A plastic acid-resistant steel tray

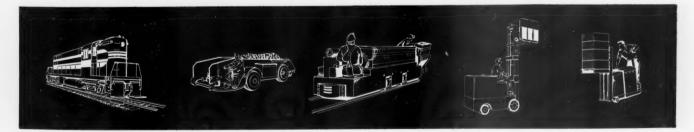
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REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.c., with last three digits omitted) MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1952

	Average				(Maint. Way and	ay and St	Structures		Operating Expenses	Expenses -				1						
	operated during	[=	perating	Operating Revenues -		Total	Total	Deprec. and Retire-	E	Total	Deprec.		1			Onerating	00	Net			
March 3 mos. March 3 mos. March 3 mos.		20000	Pass. 66 193 1,184 3,625 114 365	1952 2,246 6,501 19,009 58,583 2,687 7,612	1951 2,013 5,833 19,164 55,265 2,410 6.805	1952 358 1,016 2,746 8,115	1951 388 1,060 2,619 7,464	ments 20 222 222 664	1952 245 756 4,023 11,864	1951 207 207 661 4,048 11,055	Hetire- ments 69 208 653 1,920	Fraffic p 211 340 1,003 2	Trans- portation 574 1,719 6,734 20,498 862	Total 1952 1,323 3,925 14,512 13,481	Total 1951 1,264 3,714 14,947 42,776	- ratio 1952 58.9 60.4 76.3	1287.04	u u	tax o accruals 440 1,251 2,831 9,422	Net rai operating a 1952 425 1,149 2,054 7,337	railway ng income 1951 5 234 681 1 1,818
March 3 mos. March 3 mos. March	334 1,406 1,406 3,224 3,224	155 461 1,769 5,284 2,687		158 468 1,828 5,460 2,929	175 522 1,739 5,157 2,587	62 151 277 796 612	112 303 852 609	90 00 00 00 00 00 00 00 00 00 00 00 00 0	22. 27.5. 85.5. 85.5.	112 43 258 770	2009		2,573 60 176 564 1,754	5,339 155 419 1,346 4,085	122 349 1,404 4,045	70.1 98.6 73.6 74.8	7.0.1 69.7 80.8 80.8	2,274 2,274 50 482 482	1,134 1,134 18 52 245	856 856 154	813 813 101
March 3 mos.				220	202	1,765	1,596	135	2,245	1,949	286	232	4,013	3,044	7,920	102.6	109.3	-115	225	895	481
3 mos. March 3 mos.	3,242 3,242 3,242	18	379	441 1,257 7,474 21,159	464 1,265 6,956 20,143	68 197 984 2,849	08 176 954 2.573	11 116 336	215 936 936	84 61 187 998	25 25 25 25 25 26 26 27 26 27 26 27 27 27 27 27 27 27 27 27 27 27 27 27	35 252 252 39	185 117 346 2,470	465 266 812 4,954	442 259 738 5.058	71.5 60.3 64.6	72.5 55.9 78.3	185 175 446	34 87 109 265	224	188 199
3 mos. March 3 mos. March 3 mos.	6,950 6,950 1,104 1,727	16,854 50,603 2,785 8,242 3,552	3,007 172 566 94	19,723 59,337 3,236 9,643 3,873	20,735 57,473 3,281 9,137 3,640	3,315 8,952 675 1,944 736	3,093 9,113 702 1,966			3,963 11,033 1,528	2,062 1 299 300		432 421 242 720	1	14,625 15,831 45,339 2,650 7,653	70.1 78.8 77.1 82.6 82.0		6,325 6,325 13,602 562	2,847 1,778 5,384 121	1,962 6,755 1,962 1,962	2,301 5,776 301
March			77		11,123	2,115	2,233		1	1,689	279	1			2,820	8.89		1,130	1,706	662 1,931	326
3 mos March 3 mos March 3 mos.	178 51 51 1,032 1,032	2,212 212 633 2,965 8,537	152	2,221 212 634 3,409 9,972	2,021 171 606 3,301 9,369	290 290 21 65 570 1,581	245 21 21 44 1,394	36 36 36 138	285 87 253 498 1,462	256 256 66 238 497 1.334	23 17 127 127	18181	259 818 93 282 1,161	455 1,419 211 633 2,456	471 1,277 175 573 2,443	61.7 63.9 99.5 1 72.1	62.7 63.2 02.5 94.7 74.0	802 802 1	98 119 119 119	132 132 41 119 470	129 129 93
March 3 mos. March 3 mos. March 3 mos.	10,703 10,717 221 221 2,188 2,188	45,877 144,954 3,707 11,641 13,563 39,127	8,498 30,289 73 245 202 588	62,323 199,508 4,005 12,484 14,144 40,898	70,638 4,077 11,831 14,307 38,693	7,540 25,031 508 1,450 1,586 4 983	8,632 25,748 462 1,408 1,589	2,734 4 41 125 134	1	14,710 42,247 1,161 3,373 2,245	- 00		-	526 344 552 334 334	831 504 054 377 441	0 1.01.85	0 2000			1,350 -360 5,046 659 2,471	
New York, New Haven & Hartford. March New York Connecting March New York, Ontario & Western March	1,793 1,793 21 21	8,066 23,301 357 1,014	4,066		13,376 37,951 321 808		2,062 5,395 78			6,329 6,186 19									2,447 6,604 1,087 3,279	2,118 5,662 780 2,382	2,285 5,030 740 1,760
3 mos. New York, Susquehanna & Western March	541	1,606	38		1,773	302	101		252	39 87 252	. 23	25 76	244 258 789	559 498 1,510	455 529 1,532	51.0 88.6 90.6	88.4 86.4	537 64 156	252 36 108	328 -26 -118	231 231 40
3 mos. March 3 mos. March 3 mos.	2,135 2,135 643 643	1,198 15,971 48,419 998 2,895	116 374 1,281	1,384 17,186 52,487 1,013 2,951	1,343 16,894 46,972 955 2,697	2,330 6,852 575	52 151 6,530 6,551 476	6 17 343 302 13 13	62 184 3,871 11,700 136 378	3,514 10,071 1155 115	11 34 1,734 1,24	26 303 303 5 46 15	201 595 540 975 306	352 1,052 12,349 37,210 764	344 976 11,733 33,949 705	72.7 76.0 71.9 770.9	71.5 72.7 669.4 72.3		32 94 3,259 10,780	75 150 2,388 7,062	49 143 2.516 6,476
March 3 mos. March 3 mos. March 3 mos.	6,887 6,887 331 331 132 132	11,987 34,204 945 2,521 101 289	1,651 11 11 15	13,632 39,088 986 2,627 102 291	12,559 34,970 1,008 2,506 108 283	2,000 6,248 278 860 25 65	2,046 5,560 235 701 21	267 839 20 55 2		2,917 8,099 110 289 10							76.0 89.9 90.4 79.7 88.1		354 1,255 3,675 51 154	1,006 1,202 1,4 1,83	198 1,383 81 81 —52
rennsylvania. March 3 mos. Pennsylvania-Reading Seashore Lines March 3 mos.	10,120 10,120 364 364	65,654 1 192,013 4 590 1,780	13,796 8 41,630 25 112 345	88,222 8 258,839 23 731 2,213	88,113 1 239,640 3 735 2,064	2,23	524 212 274 728	223	363 27 745 6: 91 281		2,553 1,5 6,844 4,6 16			75,516 75, 222,601 217, 887 2,661 2,	694 300 957 1 748 1			-		5,595 15,160 15,160 11,102	36 36 1,746 1,338

REVENUES AND EXPENSES OF RAILWAYS (Dollar figures are stated in figures, i.e., with last three digits omitted) MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1952—Operating Expenses

						(F				00	Operating Ex	cpenses -				1						
		mileage	-	noratine	Rovennee		laint. Wa	ay and Str	Deprec.	Maint	ğ_	Deprec.					Onerating		Net B	- vewlie	Vet railws	×
Name of Road		during	Freigh	Pass.	Total (inc.	. misc.) 1951	Total 1952	Total 1951	Retirements	Total 1952	_	Retire-	Traffic p	. 00	_	,	1952 ratio	51	railway operation ac	tax ope	rating inc 1952	ome 1951
Pittsburg & Shawmut	March 3 mos. 3 mos. March 3 mos.			57.1	172 538 795 2,231 11,668	180 606 791 2,093 10,973	28 74 116 328 1,696	22 121 361 1,449	18 18 187 187	59 179 191 591 2,310	68 174 162 468 2,202 2,202			50 153 201 579 13 505	147 443 584 1,732 8,949 8	153 437 1,644 8,651		24.6 771.2 778.5 778.5 78.5 8.8 8.8		133 133 313 1454	47. 154. 139. 346. 1927.	23 11 159 354 073
Richmond, Fredericksburg & Potomac March 3 mos. Rutland March 3 mos. Sacramento Northern March 3 mos.	ac March 3 mos. March 3 mos. March 3 mos.		1,747 4,868 404 1,201 205 715			2,516 6,890 6,890 1,388 268 796	352 892 833 241 65 185	283 720 93 255 65 168	24 71 10 10 29 4 13	345 912 98 267 111 39	282 808 87 87 20 20 56	194 194 49 49		•	1					636 1,807 30 93 15 44	355 ,017 1 16	380 ,010 -158 +8 191
St. Louis-San Francisco & Texas St. Louis, San Francisco & Texas St. Louis Southwestern Lines	March 3 mos. March 3 mos. March 3 mos.	4,601 4,601 159 1,569 1,569	8,707 25,679 449 1,241 6,189 17,791	569 1,896 21 33 122	10,127 30,046 486 1,343 6,434	10,926 30,290 365 1,147 6,571	1,662 5,009 50 144 715 1,922	1,618 4,921 48 139 593 1,657	237 549 2 9 9 164	1,740 5,150 35 105 625 1,906	1,710 5,126 34 104 736 1,971	489 1,451 1 3 92 278	311 870 20 29 164 491	3,828 · 11,359 2 165 475 1,731 5,209 1	8,013 23,840 282 819 3,427 10,099	8,030 23,448 260 758 3,478 9,751	79.1 79.3 58.0 60.9 53.1 54.2	73.5 77.4 71.3 66.1 352.9	2,114 1 6,206 3 204 525 3,027 1 8,520 5	1,161 3,498 104 125 1,822 5,232	2,803 2,803 49 245 983 1	1,296 3,161 26 1,024 2,583
Seaboard Air Line. Southern Alabama Great Southern.	March 3 mos. March 3 mos. March 3 mos.	4,145 4,145 6,306 6,306 326 326	12,204 35,496 20,032 56,818 1,470 4,157	1,775 5,125 1,910 5,195 103 288	15,229 44,074 23,806 67,321 1,753 4,867	14,375 40,315 22,745 63,477 1,600 4,632	2,349 6,795 2,992 9,109 686	2,532 6,853 8,955 235 659	166 503 225 705 19	2,419 7,046 4,285 12,532 1,105	2,309 6,623 4,039 11,848 1,152	492 1,448 777 2,215 81 243	372 1,105 1,323 1,323 103	4,866 14,206 8,034 23,417 1,646	10,620 30,937 16,665 1,250 1,250 3,731	10,499 29,569 16,289 47,041 1,376 3,765	69.7 70.2 70.0 72.9 71.3	73.0 73.3 71.6 74.1 86.0	4,610 13,137 7,141 18,226 1,136	2,104 6,001 3,819 0,056 752	2,5119 2,946 2,849 3,255 3,839 3,839	1,662 1,498 3,042 5,795 360
Cinn., New Orleans & Texas Pacific March 3 mos. Georgia Southern & Florida March 3 mos. New Orleans & North Fastern 3 mos.	c March 3 mos. March 3 mos. March 3 mos.	337 337 397 397 203 203	3,533 9,781 597 1,775 966 2,487	272 747 747 138 363 64 176	4,035 11,145 818 2,361 1,097 2,862	3,927 10,545 756 2,144 1,109 3,134	442 1,343 151 490 145 488	465 1,336 180 484 171 496	35 95 17 18 18	823 2,449 76 209 122 367	2,288 66 187 124 352	179 505 10 29 27 82	206 206 8 23 18 18	1,027 3,059 253 726 118	2,495 7,473 514 1,523 450 1,816	2,463 7,066 527 1,438 618 1,770	61.8 67.1 62.9 64.5 41.0	62.7 67.0 69.7 67.1 55.8	1,540 3,672 304 838 647 1,046	1,117 2,449 105 284 433 710	618 1,456 75 202 229 311	601 512 51 164 175 460
Southern Pacific	March 3 mos. 3 mos. March 3 mos.	8,136 8,136 4,291 4,291 152	36,899 107,451 11,513 33,192 204 578	4,200 11,225 725 2,220 3	44,089 127,208 13,063 37,919 216 615	42,283 117,719 12,260 34,557 510	4,900 15,420 1,941 5,500 209	4,672 13,690 1,885 5,569 179	1,383 1,383 113 373 6	9,048 25,604 1,847 5,339 65	8,191 23,606 1,957 5,258 5,258 58	1,538 4,530 88 265 8	2,443 256 779 15	16,263 48,237 4,383 12,924 172	33,039 3 97,699 9 8,996 2 26,196 2 165	31,332 90,007 9,111 26,001 142 435	74.9 76.8 68.9 69.1 76.7	74.1 1 76.5 2 74.3 75.2 1 71.0 84.1	11,050 29,509 4,067 11,722 127	6,115 16,448 1 1,917 5,558 36	4,445 11,714 1,250 3,510 56	4,415 9,794 1,091 2,764 17
Spokane, Portland & Seattle Tennessee Central Texas & Northern	March 3 mos. March 3 mos. March 3 mos.	931 931 286 286 8	2,355 6,497 380 1,243 112 285	265 3 10	2,583 7,186 1,325 126 317	2,239 6,198 1,256 116 322	393 1,082 112 327 7	344 1,029 91 262 14 32	132 132 15	334 966 65 205 27	296 821 73 209 9	268 119 555 7	30 32 32 33 33 33	2,273 146 449 25 66	1,623 4,675 356 1,079 129	1,506 4,259 349 999 61 164	62.8 65.1 87.0 81.4 36.2	67.2 68.7 84.4 79.5 52.6 50.9	960 2,510 53 246 80 188	376 892 28 77 44 96	494 1,402 —7 67 24 60	484 1,214 9 74 20 67
Texas & Pacific. Texas Mexican. Toledo, Peoria & Western.	March 3 mos. March 3 mos. March 3 mos.	1,834 1,834 162 162 239 239	5,896 17,212 287 745 568 1,733	1,177	6,783 20,000 305 805 578 1,758	6,658 18,627 319 813 606 1,873	2,865 80 240 95 258	2,490 75 192 90 208	83 400 18 18 19	1,146 3,444 27 82 49 133	2,768 37 88 41 109	257 258 259 251	184 541 26 45 133	2,102 6,429 62 170 1117 405	4,664 14,242 197 575 342 1,028	4,557 12,884 201 539 347 977	68.8 71.2 64.5 71.4 59.2 58.5	68.4 69.2 66.2 57.2 52.2	2,119 5,758 230 236 730	1,046 2,771 52 101 114 344	716 2,057 41 76 90 266	734 2,066 51 109 76 265
Union Pacific. Utah. Virginian.	March 3 mos. March 3 mos. March 3 mos.	9,867 9,867 110 110 611 611	34,630 100,192 124 517 3,942 12,555	3,118 9,569 	40,967 119,193 124 517 4,110 13,074	42,258 114,697 79 291 3,843 10,632	6,013 14,858 21 63 529 1,532	5,184 13,211 17 48 407 1,146	390 1,214 2 6 59 175	7,845 22,989 51 161 968 2,920	7,926 22,295 52 156 778 2,238	1,161 3,488 6 15 171 514	1,007 2,816 1 2 47 137	14,858 44,644 61 256 978 3,012	31,807 3 91,733 8 141 504 2,608 7,878	30,670 85,709 120 383 2,146 6,142	77.6 77.0 113.7 97.5 63.5	72.6 74.7 152.3 131.6 55.8 57.8	9,160 27,460 17 13 1,502 5,196	6,104 18,550 11 35 927 2,825	1,989 6,167 —22 —18 673 2,690	3,535 7,514 —42 —102 769 2,176
Wabash Ann Arbor Western Maryland	March 3 mos. March 3 mos. March 3 mos.	2,393 2,393 294 836 836	8,955 25,114 771 2,271 4,213 12,531	323 1,249 8	9,984 28,433 777 2,291 4,460 13,289	10,121 28,077 834 2,320 4,393 12,493	1,185 3,337 93 273 532 1,491	1,155 3,189 74 226 571 1,587	123 318 17 50 50 137	1,298 3,830 115 350 869 2,674	1,245 3,615 110 317 819 2,370	341 995 30 89 174 521	856 27 28 252 252	3,924 11,678 338 975 1,357 4,157	7,079 20,743 592 1,733 3,016 9,071	7,010 20,111 558 1,623 2,975 8,573	70.9 73.0 75.2 75.7 67.6 68.3	69.3 71.6 67.0 70.0 67.7 68.6	2,906 7,689 185 558 1,444 4,218	1,320 3,417 83 261 793 2,329	1,159 3,015 80 247 835 2,404	1,188 2,819 1118 283 800 2,242
Western Pacific	March 3 mos. March 3 mos.	1,193 1,193 1,046 1,046	4,086 11,441 2,386 7,097	237 649 34 109	4,409 12,352 2,573 7,655	4,672 13,121 2,446 6,871	2,059 323 988	621 1,636 305 842	201 40 110	2,012 509 1,456	739 1,951 450 1,542	119 376 65 192	183 588 73 216	1,396 4,077 1,110 3,325	3,150 9,402 2,120 6,300	3,037 8,435 2,050 6,112	71.4 76.1 82.4 82.3	65.0 64.3 83.8 89.0	1,259 2,950 453 1,355	709 1,678 150 459	465 1,037 93 393	734 2,292 56 -271



The CF&I End-Hardening Process is automatic. The passage of the rails through the successive heats and final air-quench is electrically timed and thermostatically controlled through this panel.

END-HARDENED



As a service to Western Railroads CF&I end-hardening facilities eliminate:

- Guesswork in End-Hardening
- Haphazard Rail End Patterns
- Damaging of Rail Ends before End-Hardening

The Western Railroads' progressive attitude is complemented by another CF&I development.

NEW and IMPROVED PRODUCTS of the MANUFACTURERS





The model "59" is a new member of the "Spacemaster" line of electric fork lift trucks produced by the Lewis-Shepard Company, Watertown, Mass. Its capacity is 1,500 lb. while the turning radius is 59 in. Lift speed (loaded) is 50 ft. per min. The "59" makes up to 6 m.p.h.

Insect and Odor Destroyer

Hysan Products Company, Chicago, has announced a machine, called the Hy Tron, that combines odor and insect control. It is designed to destroy odors and kill flying insects simultaneously and by throwing a switch, it can be made to perform either of these functions separately.

The machine is equipped with an electric fan for delivering freshened air and a heating element that vaporizes a Lindane-based insect tablet for killing flying insects. It is fused so that it meets Health Department and other state and federal safety requirements. It has a pilot light that tells when it is operating and a thermostat for automatic

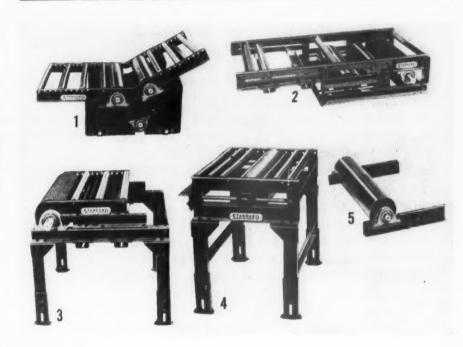
pilot light that tells when it is operating and a thermostat for automatic control. A bracket is furnished for use when the unit is to be mounted on the wall. A hinged back door may be opened with a key for replacement of the air freshener.

The unit may be touched without fear of burning fingers or hands.

High Temperature Aluminum Paint

An aluminum paint which the manufacturer claims will withstand extreme heat as high as 1,200 deg. F. has been announced by the Illinois Bronze Powder Company, Chicago 6, Ill. This product named Hi-Temp is a special ve-

hicle. It is said to insure protection against peeling. Hi-Temp is recommended for railway and industrial uses including furnace fronts, boilers, engines, steam pipes, etc. No special surface preparation is needed; one coat will cover by brush or spray application. It dries in one or two hours.



Conveyor Belt Units Of Heavier Design

The Standard Conveyor Company of North St. Paul, Minn., has introduced a line of heavier conveyor belt units that can be used as components of a "custom-designed" conveyor system. The new units, the "Handidrive 1,000," will handle a load generating a belt pull of 1,000-lb. whereas the original model (also available has a maximum capacity of 400-lb.

Basic units of the new system (see illustration) are:

(1) Triple snub assembly for trans-

ferring loads from horizontal to incline.

(2) Center drive and takeup assembly for mounting underneath conveyor frame. It drives the return strand of the belt and comes equipped with motor mounts.

(3) End type drive unit for use with drive at head of the conveyor. It comes equipped with necessary motor mount-

(4) End type takeup for use at tail end of conveyor when end type drive is used.

(5) End type roller assembly for use with center drive unit.



The LFM Co. has served the railroads for 80 years. In this time LFM has built a wide understanding of the railroads' needs and problems. This knowledge and experience coupled with trained personnel and facilities means LFM is geared to better engineer and produce railway equipment.

The modern, complete LFM facilities are all under one management and housed in two great Mid-western plants covering more than 15 acres of ground.

The invitation is always open to all the railroads to utilize our highly specialized organization at any time to solve present problems or meet future needs.

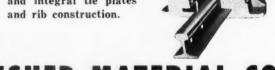


. *Automatic* Brake Slack

Adjuster—Completely designed, engineered and produced by LFM, this automatic adjuster offers simplicity of design, installation and maintenance found in no other adjuster.



Designed for yard service, the LFM steel frog offers improved type rail joints, patented supporting shelf and integral tie plates and rib construction.



THE LOCOMOTIVE FINISHED MATERIAL CO.

NEW YORK CITY

CHICAGO, ILL.

ATCHISON, KANSAS Home Office & Plant







DIESEL LOCOMOTIVE ONE PIECE TRUCK FRAMES

FOR OVER 80 YEARS A MAJOR SOURCE OF SUPPLY FOR RAILROAD CASTINGS

HERBERT HOOVER, HARBINGER OF SOCIALIZATION

Former President Herbert Hoover has written his memoirs—an interesting book,* but not one calculated to add much lustre to his fame as an economist or political philosopher. As compensation for the character assassination Mr. Hoover suffered from tawdry political assailants, a reaction has now set in; it has become the fashion to portray him as something of a sage, whose wisdom the American people are belatedly beginning to appreciate. As admirers of the former President's sincerity and strength of character, we wish we were able to subscribe to this revised estimate of his sagacity, but to do so would stretch charity to the detriment of veracity.

His memoirs show that he isn't at all repentant for the socialistic policies he fostered as secretary of commerce and as President, and his criticism of railroad executives who disagreed with him is scarcely in keeping with his reputation for charitableness. "It is," he writes, "a suggestive thing that the railway presidents who led the opposition [i.e., against Commerce Secretary Hoover's intervention in the 1922 shopmen's strike] had their offices in New York City. They have mostly gone to their rest in graves unknown to all the public except the sexton, or they still dodder around their clubs, quavering that 'labor must be disciplined.' "He goes on:

"It is a safe generalization for the period to say that where industrial leaders were undominated by New York promoter-bankers, they were progressive and constructive in outlook. Some of the so-called bankers in New York were not bankers at all. They were stock promoters. . . . Their social instinct belonged to an early Egyptian period."

Reading such things makes one look twice to be sure that it really is Herbert Hoover, and not Henry Wallace, who is doing the writing.

The former President is not at all apologetic about the major role he played in getting the government embarked upon its colossal program of wasting the public's substance in canalizing rivers everywhere. He recounts with evident pride and satisfaction his 1925 and 1926 reports to Congress wherein he advocated "vigorous utilization of our water resources for cheaper transportation of bulk commodities, flood control, reclamation, and power." Again: "Navigation should be improved at the direct cost of the federal government, but with contributions from local governments."

Advocate of Waterways . . .

This esteemed statesman, even at this late date, is plainly oblivious to the elementary economic fact that, when transportation facilities (such as the waterways) are provided at the taxpayers' expense, there inevitably follows diversion of traffic to these facilities beyond their inherent economy. A schoolboy should be able to understand that the country is not enriched but impoverished, when its work is thus diverted from methods requiring less labor and capital to those which require larger amounts of both.

Moreover, it may well be inquired, how does a man retain a reputation as an individualist when his record is jam-full of instances of active promotion of government intervention into a diversity of situations which a genuine individualist would insist were none of the government's business?

"Why always 'the state'? Is that repellant institution to be the universal dry-nurse, excusing us from doing anything for ourselves or each other?"—such was the exclamation of a genuinely untainted individualist at the suggestion, even, that "the state" should supervise the education of children. Government is only one of many institutions in society and, in a really free society, government functions are kept to a minimum. Few people will quarrel with the humanitarian objectives in which Mr. Hoover reveals his interest, but it certainly

^{*} Published by Macmillan

requires more than a slight tolerance of socialism to agree with him that government—that is, organized coercion—has any necessary or excusable part to play in the attainment of most of these objectives.

On the subject of industrial relations Mr. Hoover says, among other things: "I insisted that labor is not a 'commodity.'" It is certainly true that the workingman is not a commodity, but his service is—in exactly the same way that a farmer is not a commodity, but the wheat he takes to market is. No pronouncement by a politician or labor leader to the contrary, however well intentioned, can alter this fact, any more than they could successfully make 5 out of 2 x 2. It would be excusable if a President with the limited background in large affairs of Mr. Coolidge, Mr. Roosevelt or Mr. Truman should be slow to comprehend such primary economics.

. . . And St. Lawrence, Too

The former President continues his defiant pride in the support he gave to the St. Lawrence seaway—the utter negation of individual self-reliance, and the perfect symbol of "interventionism" and "big government." In sum, there is hardly any economic heresy which came to fruition under President Roosevelt which he or his subordinates had to invent. All they had to do was hatch the socialistic eggs Mr. Hoover had laid all over the place, and which he candidly outlines in his memoirs with no hint whatever of apology or repentance.

As Dean Inge wrote: "The greatest danger to civilization is the increased power that science has given to governments. When they have once got control of the machinery they can suppress any exercise of the popular will." Mr. Hoover, certainly with the noblest of intentions, did not keep applied science and politics apart—as they must be kept if political and economic freedom is to be retained. On the contrary, he did all he could to promote their unholy and unhealthy alliance. It is a great tragedy that so good a man could not have been endowed with deeper discernment. It is an even greater tragedy that he and many of his admirers do not, even today, perceive that there can be no such thing as a mild and beneficent case of socialism, any more than there can be a mild and beneficent cancer.

Of President Coolidge, Mr. Hoover writes, "I soon found that he had no liking for many of my water development projects, because they might involve money." Practically all Presidents up to the time of President Hoover felt the same way about these projects. The change in this country's traditional economic and political course did not come in 1933 with the inauguration of Franklin D. Roosevelt, but in 1929 when Calvin Coolidge retired from office.

HOW TO SAVE MONEY IN POWER PLANT OPERATION

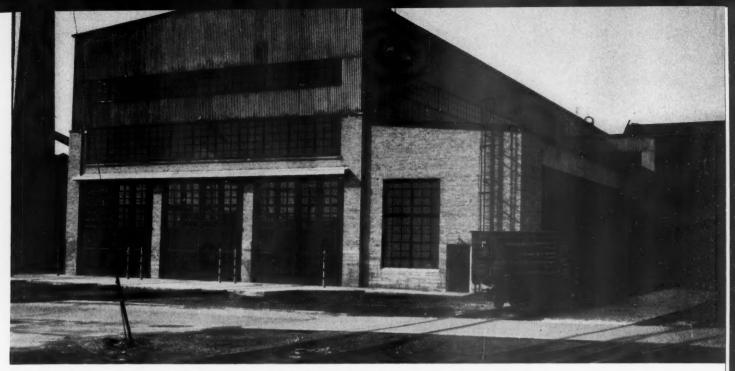
When people get to talking about modernized shops, they don't usually get any further than improved machine tools, better layout, and more efficient ways of handling material. Most of the time they neglect to consider that obsolete power plant facilities don't go well in a really modern set-up.

Power plants can get out-of-date for all the reasons that other equipment does, and for one other reason besides. Like cars, locomotives and shop tools they become obsolete because of deterioration from use and old age, and from advances in design. But, in addition to the standard causes for obsolescence, power plants can also become obsolete because of a decline in the demand tor the services they supply. This can come from a number of causes: a principal one is the conversion of a steam terminal to the handling of diesel-electric power. Normally this change substantially lowers the demand for steam, because less space need be heated, and steam is no longer required to heat boiler wash water nor to draft locomotives being fired up. The demand for shop air is normally cut in half or even further.

When a power plant furnishes large quantities of steam and air, and perhaps electric power, it is easy to see how manually attended stoker-fed coal-burning boilers can be more economical than automatic boilers using more expensive fuel. The lower cost per B.t.u. of coal over oil, and in some instances over gas, results in fuel savings more than sufficient to pay the wages of the attendants.

The reverse is true at a power plant supplying a comparatively small demand. The amount of fuel required to handle the load is not so great that the difference in the cost per unit of heating value for the different fuels, multiplied by the units needed, can equal the wage bill for the stationary engineer and firemen. Under such circumstances, any increase in the fuel bill resulting from burning the more expensive fuel, normally required for boilers requiring no attendants, will be less than the savings resulting from elimination of attendants.

The experience of roads which have changed over to automatic installations suggests the wisdom of making such conversions, especially at points where the demand is very light. Records show that where the demand for steam is in the neighborhood of 5,000 lb. per hour or less, the conversion can be made to pay for itself in a year. Where the demand is two or three times this amount, it may take two to four years to recover the investment in the changeover. The smaller the demand that the boiler must supply, the greater is the proportion of attendants' wages to total operating cost, and the greater the savings in relation to the cost of installation.



The Milwaukee's new diesel heavy-repair shop at Milwaukee was built of structural steel recovered from an old steam-locomotive facility at Minneapolis. The lean-to addition houses an area for engine repairs, while an old building, contiguous with the new shop, was converted to a small-parts reconditioning area.

Steel for New Diesel Facility . . .

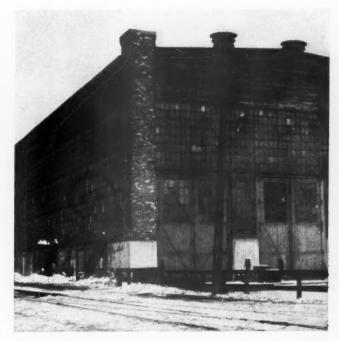
Old Boiler Shop Moved 335 Miles

By dismantling structure at Minneapolis and re-erecting it at Milwaukee, the C.M.St.P.& P. gains a year as compared with time required if new building had been constructed

The construction of new buildings to handle diesel-electric power is commonplace today. It is equally commonplace to see old steam shops being retired and eliminated because they are no longer needed. But it's news when one of these old buildings, or at least its structural frame, is torn down and moved elsewhere to start life all over again as a diesel shop. That's what was done on the Chicago, Milwaukee, St. Paul and Pacific when the road found it needed a new diesel facility at Milwaukee, Wis. The structure so resurrected was an old boiler shop at the road's Minneapolis terminal, 335 miles away.

The road already had a diesel maintenance shop at Milwaukee, but no heavy-repair facility. Despite the fact that there were many old structures at this major locomotive shopping center of the Milwaukee, there was none of sufficient size that could be spared for the new diesel shop. Building a new shop structure was not appealing because it would require about nine months to obtain delivery of the necessary structural steel and from 18 to 24 months to get delivery of an overhead crane. Also, it was not considered practical to separate the diesel repair work and maintenance by converting the old boiler shop in Minneapolis to a diesel facility in its old location. So it was decided to dismantle this structure and re-erect it at Milwaukee.

In view of the fact that the existing diesel maintenance shop at Milwaukee contained a drop table, it was de-



The old boiler shop at Minneapolis, seen here in its original location, being structurally sound, was dismantled and reconditioned for its new role as a diesel shop at Milwaukee.

Building Was Sound

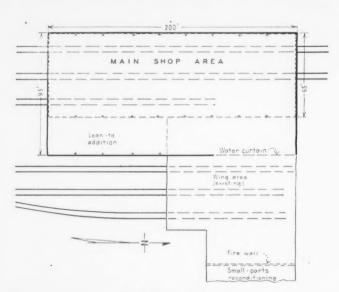
The boiler shop building in Minneapolis, although built in 1913, was structurally sound. It was 65 ft. by 200 ft. in plan and consisted of a brick and steel building having a single high bay. Fenestration in the sidewalls was almost continuous. It also contained a much-needed overhead crane of 30 tons capacity.

It was planned to reuse the entire building, and for the most part this was done. The overhead crane, all structural steel, lighting, wiring and fixtures, roof ventilators, and blast heaters were salvaged and reused. But the roof deck was so badly damaged during the dismantling work, and so many of the window sash were broken, that these materials could not be used again.

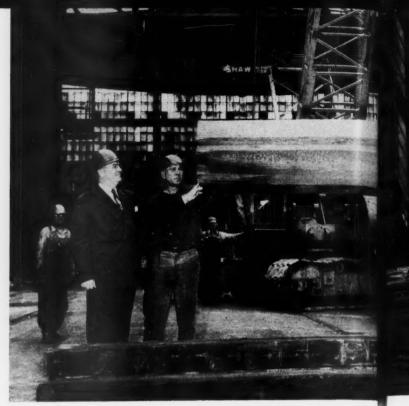
All steel members were marked as to their location before dismantling so that they could be reassembled without difficulty. Dismantling work was carefully carried out, rivets being knocked out where necessary and the steel roof trusses being cut in half at the construction joints to facilitate loading and transportation on cars. All steel was reconditioned by cleaning and painting so that, when it arrived at its new erection site, its condition was almost as good as newly fabricated steel.

The dismantling work was done by railway forces. It was started in April 1951 and was completed in five weeks.

While the dismantling work was being carried out in Minneapolis, the foundation work—concrete piers and walls supported on creosoted timber piles—for the new structure was started in Milwaukee. The concrete foundation was carried up a little higher from the floor line



Layout of the new heavy-repair diesel shop at Milwaukee, showing by the dashed line the 65-ft. by 200-ft. structure reused from the old Minneapolis shop.



J. P. Kiley, president of the Milwaukee, looks over some of the material as it is being recovered from the old shop at Minneapolis.

in the relocated building than in the original to afford more headroom for the crane. Also, more room than that afforded by the relocated structure was needed to provide sufficient floor area for handling the diesel repair work.

This problem was solved by building a lean-to addition and by locating the new structure near an existing small-parts reconditioning building so that a large room in that building could be used to form a wing about 100 ft. long by 110 ft. wide. The lean-to addition, approximately 28 ft. wide by 90 ft. long, was constructed along the wing side of the relocated structure. The structural steel for the lean-to, as well as for bridging the gap between the relocated structure and the existing building, consisted of reconditioned secondhand bridge steel on hand at the company's main reclamation point.

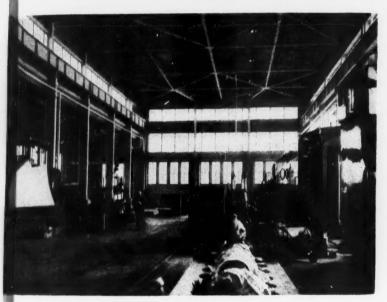
Commercial projected steel sash, three panels high, was used to replace the former sash. Common brick was used from the foundation to the underside of the windows, but was carried up to the top of the fenestration at the corners of the building. Above the fenestration, corrugated asbestos-cement siding was used. New rolling steel doors were installed at the north end of the new structure where unusually wide openings were needed because of track curvature, while wood bi-fold doors were used at the south end.

Inside the building, three 20-ft. jib cranes, each of 3 tons capacity, were hung on columns to serve the lean-to area which was assigned to the repair of the diesel engines. Also, an office, enclosed on three sides by large glass panels, was provided at mezzanine level at the north end of the building where the foreman can view all operations both in the main shop and in the wing. The three blast heaters recovered at Minneapolis were reinstalled in the relocated structure and these units were supplemented by manually controlled grid-type unit heaters placed at a lower level on the sidewalls.

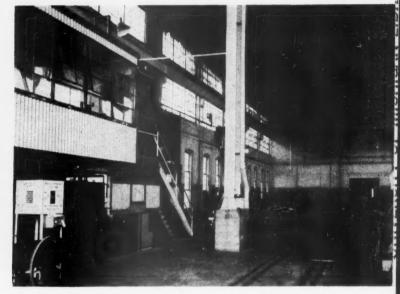
The large room taken over for a wing to the new diesel shop had brick walls at both ends, one being a firewall and the other being an exterior wall of which a large portion was removed. Normally, the exterior wall would have been retained to comply with code requirements relative to the limitation of floor area between



Before the structural steel was dismantled at Minneapolis, it had been marked for identification so that there was no confusion when reassembling it. The foundations for the steel columns were made higher in the new building to afford more headroom for the overhead crane.



The main shop area has a three-door track entrance. Rolling steel doors were installed at the north end, while wood bi-fold doors were used at the south end.



The crane runway of the converted wing area was extended to reach the main shop area. Foreman's office (left) is at mezzanine level.

firewalls. But such a wall would seriously interfere with shop operations, so the road substituted a "water curtain" system across this opening. This system, which meets the regulations of the National Fire Underwriters' code, the state of Wisconsin building code, and the building ordinance of Milwaukee, is of the deluge type.

In the event of a fire, this system produces a curtain of water across the opening. It consists of several heat-actuated devices, known as heat detectors, which are hung at roof level and which are connected by air tubing of small-diameter copper to an automatic release on a deluge valve. The copper tubing is enclosed in steel tubing for protection. Open-type sprinkler heads are mounted on a water pipe suspended directly beneath the steel girder that spans the opening. The pipe line is connected by the deluge valve to a city water main.

The pipe line from the deluge valve to the sprinkler

heads is normally dry. Normal atmospheric temperature fluctuations do not actuate the system, but any appreciable rise in temperature, as would result in the event of a fire, causes a raise in the air pressure within the copper tubing, which in turn releases the clamp holding the deluge valve gate and allows the city water to pour out through the line and sprinkler heads. This system is also connected to the general fire-alarm system of the shop grounds so that other fire-fighting equipment can be brought to the building when needed. In addition, a "trouble" alarm is provided so that any reduction or lack of pressure in the main city water supply line will be made known in advance, permitting adjustments.

All work involved in constructing this shop was done under contract and was carried out under the general direction of W. G. Powrie, chief engineer, and under the direct supervision of K. E. Hornung, architect.



Preclassification of trains at one terminal may mean extra work there, but it will mean less work for other yards in a railroad system.

How Can Carriers Secure Better Car Handling In Yards And Terminals?

When car is in railroad hands it spends 70 per cent of the time in yards and terminals—Preblocking trains cuts yard switching

By E. W. COUGHLIN

Manager, Railroad Relations Car Service Division Association of American Railroads

This series of articles has dealt at some length with yard records and reports having to do with car use and detention, although the author does not undertake to deal with actual methods of operation of yards and terminals. It is impossible, however, to spend several years in checking car detention in railroad yards without stumbling over some operating policies and practices which have a direct bearing upon freight car efficiency. This article, therefore, may be considered as an airing of the author's personal views of the matters discussed.

Either preclassification or blocking of trains, or the lack of a well-worked out and adequately enforced program toward it, has a very definite effect on car detention and yard congestion. In the earlier days of railroading freight trains generally were made up of any cars on hand for movement to or beyond the next terminal, without regard to final destination or class of freight. Thus each successive terminal or yard switched out from their

chance locations in each arriving train the cars belonging in its environs as well as those cars for local stations short of the next terminal. (Such cars hereafter will be referred to as local business.) The balance, plus such loads and empties as were "made" at the terminal or from incoming local movements, were let go in the same chance order into succeeding trains run to the next terminal. Obviously, results of such practice were: numerous switchings of each long-haul car; excessive tying up of switch power and crews and switch-

WAYS AND MEANS TO GREATER CAR EFFICIENCY

This is another in a series of articles by Mr. Coughlin on basic principles and preferred practices in freight car distribution and handling which was inaugurated in the February II Railway Age. The next article is scheduled to appear in a June issue.



The lack of a well worked-out preclassification program or failure adequately to enforce such a system contributes greatly to car detention and yard congestion.

ing leads; delay to trains and cars; and high terminal operating costs.

With increased traffic and advances in the science of railroad operation there gradually emerged plans and arrangements for building up through trains. Such trains operated over long distances and through many intermediate terminals with changes only of crews, engines and cabooses and with no switching of cars at intermediate yards. Trains so handled generally are known as "relay" trains, or "main-liners." Sometimes the low volume of through traffic or other considerations made this operation impracticable, or required too much car delay at the initial terminal to assemble a full train for the ultimate terminal. Therefore, many arrangements were made for "blocking" or "preclassifying" trains out of original terminals, and of "cuts" to be added at intermediate terminals.

Expert Study Required

Obviously, all these arrangements required much expert study of the yard tracks available at each terminal; the operating conditions, flow of business, etc., along with provision of added—or changes in the use of existing—classification tracks at some terminals. Where at any given point one track had, for example, formerly been sufficient to receive cars for the next terminal to the west, this might not, after the changes, have been the case. If through trains were to be built up for a half dozen destinations, or cars for a half dozen other yards were to be inserted in trains in "block" order, six classification tracks might have to be provided.

Offhand, therefore, it might seem that blocking or preclassification could be accomplished only at the expense of adding numerous classification tracks at original or intermediate yards, and of extra switching to these tracks. Actually, working with an adequate knowledge of the overall plan for the system and the yard facilities available at each terminal, it was possible

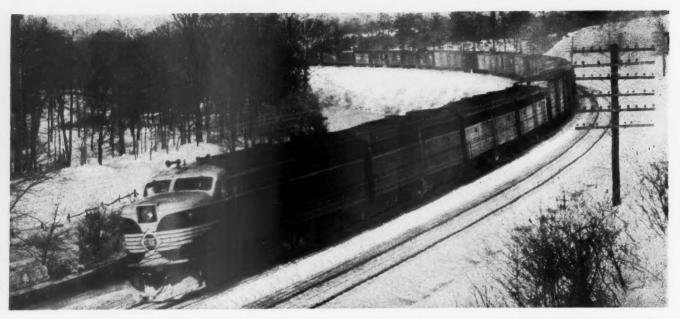
for experts in yard operation on individual roads to put the plan into effect with surprisingly few added tracks or track changes.

Additional classifying necessary at one terminal in the way of preclassifying or blocking for terminals beyond in one direction generally was offset by less switching of trains into that terminal. Thus an easterly terminal on an individual line might be required to make more through train or block classifications on westbound traffic, but it gained through the fact that its local and through business came in solid trains or assembled "blocks" in trains from the West. Also, it was no longer necessary to make perhaps a score of switches of an inbound train from the East to take out 30 local cars. On those roads where preclassification and blocking programs have been neglected much serious congestion, and at times the almost complete paralysis of intermediate terminals, is traceable to that neglect.

B. & O. Program

One of the—if not the—most intensively and thoroughly developed preclassification and blocking programs known to the writer is that of the Baltimore & Ohio, applying to both fast and slow freight service. The B.&O. program is based upon a careful analysis of yard facilities, conditions and costs. The railroad's aim is to classify cars into destination blocks as completely as possible near points of origin, so that blocks (and sometimes whole trains) may be run without break-up through intermediate terminals to destination. This blocking scheme now is published in a 177-page, pocket-size book titled "Working Book No. 19," issued by the general superintendent of transportation.

It must be apparent that the working out of a competent and practicable plan of this sort will require the services, for a considerable period of time, of men who have thoroughly familiarized themselves with every phase of terminal layout and operation, the kind and amount



In tough operating country tailoring motive power to trains of a predetermined tonnage means that cars in through trains seldom miss schedule unless cut out because of some bad-order condition.

of tonnage handled, and other numerous factors. It is no job for someone to do in his "spare time," nor one for theorists or men not proved competent in the field of yard operation. To the credit of the B.&O. it must be said that it has maintained for many years a well organized, competently staffed yard and terminal operations department. That department has authority to put into-and maintain in-effect the necessary procedures and practices to make such a plan effective.

Another product of this excellent organization is a set of "Working Books" for the individual terminals. These books carry instructions as to assignment and scheduling of yard crews; yard track assignments: local car carding instructions: and instructions as to make-

up of various reports and records.

"Tailoring" Freight Trains

On many roads the practice prevails to a considerable extent of tailoring through trains to fit the grade situations on each successive operating division, with tonnage added to or substracted from trains at various intermediate terminals. This seems to result, almost invariably, in considerable detention to "cut out" cars, awaiting opportunity to forward in later trains. On other roads the policy is to "tailor" the motive power to long distance through trains of a certain determined tonnage, using heavier locomotives on divisions with the moderately heavier grades, and double-heading or affording helper engine service on the divisions with most severe grades. The Great Northern particularly has followed the latter course, with the result that full tonnage trains generally run intact on that road from the Twin Cities to the West Coast, and vice versa. The only cars which miss schedule, once they are incorporated in these through trains, are the few which may be cut out en route in bad order or for other unusual causes.

In some instances, where trains run on established schedules and handle largely certain classes of freight requiring fast movement, the railroad sets up symbols which give those interested, in short form, pertinent information concerning the train and its schedule. The symbols usually indicate the principal point of origin, the destination, and the date of departure from the originating point. Thus, for example, a train scheduled as No. 91 leaving Chicago May 6, and set up to carry principally fast freight from Chicago to Dallas, might carry the symbol CD-6. A somewhat slower train, handling principally Chicago to Dallas business, which might be carried on the time cards as No. 93, also leaving Chicago May 6, might be symboled CDS-6. meaning Chicago to Dallas secondary train, originating on the sixth day of the month.

There are some advantages in thus symboling scheduled freight trains. Those interested in whether or not trains and cars are making schedules, or in the passing time at various terminals of cars on a certain train, can gain this information more readily from letter and number symbols than from the mere schedule number of the train. Thus, in the case of the first train mentioned, if one should wish to know the last passing point of a car which left Chicago in Train 91 on May 6, he could get it more accurately from a later passing report showing CD-6 than from one which merely showed passings of Train 91. The 91 number might refer to the train which left Chicago on May 5, May 6 or May 7, or in fact, any other date.

Obviously, for the purpose of following car movements or locating cars for diversion or other purposes. it will be necessary also that prompt reports be made to all interested as to cars set up short of destination for any reason. Subsequently, interested parties should get reports of the symbol train in which the car is forwarded.

The value of advance consists cannot be overemphasized. It makes little difference whether they be sent by telegraph, Teletype or telephone. Teletype, however. seems to have distinct advantages where volume of traffic justifies the expense of installing, maintaining and operating an adequate installation. Sufficiently detailed advance consists permit the train clerk to prepare switch cards or switch lists in advance of train arrival. Such information also will permit more thorough and leisurely checking of diversion, spotting or other special instructions which may be on file as to individual cars. In many cases the advance consists will make it possible for the inbound train clerk to handle the necessary clerical work for all arriving trains. In the absence of advance consists other members of the yard office staff may have to be taken off their desks to assist the train clerk when more than one important train arrives at about the same time. The advance consists are invaluable to yardmasters in planning the yarding, switching and handling of incoming trains. These data are of great benefit also to icing and heater crews.

At its modernized Lincoln, Neb., yard Chicago, Burlington & Quincy forces get in advance detailed Teletype consists. A general yardmaster from another country, studying yard operations in the United States, made the following comment after watching the handling

of a Chicago-to-Denver train:

The yardmaster noted from the Teletyped consist that the train had 110 cars, with 61 cars for Denver on the rear end. Therefore, he arranged yarding of the train in one of the departure yard tracks adjacent to the classification yard, and instructed all concerned as to the manner in which the train was to be handled. With this advance preparation, the train was switched from the head end, cars marshalled to both ends, and the train dispatched in 40 minutes. A similar operation under our present methods at—yard would entail at least three hours, despite a considerably larger yard office personnel.

Freight cars produce three-quarters of the total rail-road revenues. This should make it obvious that every practicable avenue should be exhausted to speed up freight car handling so that equipment may be used as

efficiently as possible.

In 1933 the Federal Coordinator of Transportation attempted, for the first and only time within the knowledge of the author, to ascertain what proportion of the time a freight car spent in the hands of shippers and receivers and in the hands of the railroad. He also tried to divide the time the car was under railroad control between that spent in yards and terminals and that in movement. The figures produced are interesting.

For some 50,000 loads this study indicated a total of 144 hours for overall movement, i.e., for loading, movement and unloading, 68 hours of this time being chargeable to shippers for loading and unloading, and 76 hours to the railroads. (Apparently this study did not include time necessary to relocate cars between loadings.) Of the 76-hour railroad time, cars were shown to be in yards or terminals 53 hours, or 70 per cent of the total, while for only 23 hours or 30 per cent of the

time were cars in train movement.

Unquestionably yards and terminals are the railroad locations where freight cars suffer the most serious detention, and where congestion or lack of records and adequate, experienced supervision can most quickly produce car delay and inefficiency. Benefits from improvements in yard practices or supervision extend, therefore, considerably beyond the lowered costs they may produce in the operations at a particular yard. The improved practice may in fact, as mentioned above, mean increased switching and cost at one or more yards, in order to bring about even more material savings in car ownership or car hire costs and other benefits to the individual railroad. Better yard service may, in the end, mean better service to the shipper as well as a more satisfactory car supply.

Every effort, therefore, should be bent toward selection of competent yard and terminal personnel; and toward promotion of yard employees up the operating department ladder. Every practicable aid should be given to those charged with yard and terminal operation so that they may reduce the time of cars in yards to the

lowest practicable minimum.

Many such aids have been developed or are now being introduced. Some of them include: elevated tower offices for yardmasters; loudspeaker systems arranged for two-way communication between the yardmaster and



When the consist of a freight train is known well in advance of the train's arrival at a terminal it pays off in reduced yard time as well as in other ways.

any part of the yard; short wave radio for communication between yardmasters and switch crews; pneumatic tubes for transporting waybills to receiving and departure yards, icing stations, etc.; and dictating machines for recording numbers as cars are switched into departure tracks. The latter also may be used for checking inbound trains as they pass a yard clerk.

All these avenues toward obtaining greater efficiency in yard operation deserve the fullest study by the executives and operating officers of the railroads.

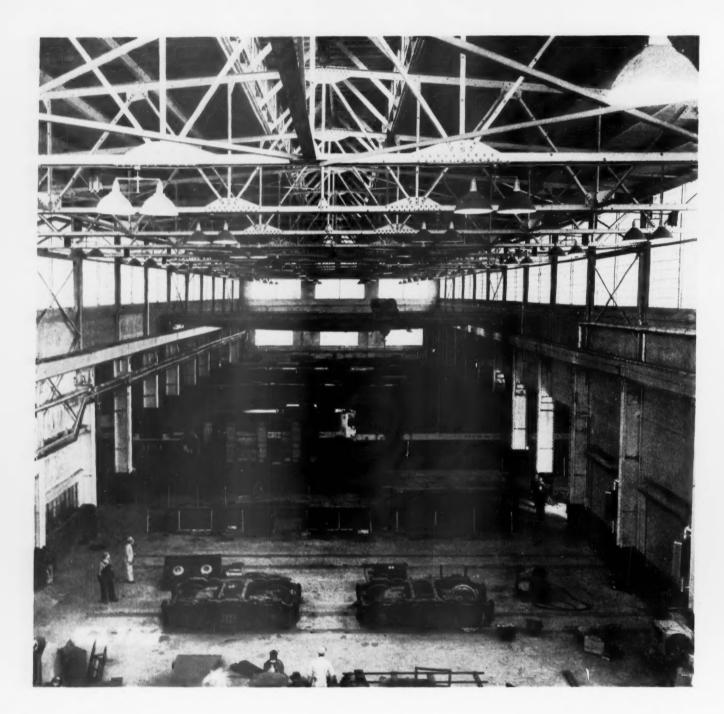
Train 97—Pittsburgh Section Brunswick, Md., to Pittsburgh, Pa.

I K	AIN CLASS	SIFICATION
From	Symbol	Grouping
Brunsw'k to C'ville, Pa.	Y-1	Quick Dispatch Connellsville and beyond, including Pitts- burgh; Buffalo-Rochester and connections.
C'ville to Pittsburgh	Y-5	Demmler District.
C'ville to Pittsburgh	Y-7	36th Street District.
C'ville to Pittsburgh	Y-9	Willow Grove District.
C'ville to Pittsburgh	Y-9-A	Allegheny District.
C'ville to Pittsburgh	Y-11-A	
C'ville to Pittsburgh	Y-11	Tenth Street District, Pitts- burgh
Brunsw'k to Cum'd	Y-37-H	Cincinnati and beyond High

CONNECTIONS AND WORK

COLLIA	-011011	13 / III II III III	
From		То	
Brunswick—New York	97	Cumberl'd—Y-37-H-High	97
Brunswick—Philadelphia Brunswick—Baltimore Brunswick—Baltimore Brunswick—Potomac Yd	97 93 97	Pittsburgh (Laughlin Jct.)	102
Va. Cumberland—North East Cumberland—Central Stat Dispatch	97 97 es 97		

A page from the Baltimore & Ohio's "Working Book," minus the train's schedule, shows the completeness and detail of the B. & O.'s pre-blocking system.



The Missouri Pacific's latest diesel-electric locomotive shop houses twelve tracks and has 192 units assigned to it for heavy maintenance. Turn-around service is given to an average of 12 additional units daily and trip service to another 24.

The new facility was converted from the existing steam locomotive back shop at Kansas City. Mo., and, as converted, has maximum overall dimensions of 382 ft. by 241 ft. Four of the twelve tracks are devoted to road locomotive servicing with the surrounding floor level depressed 3½ ft. below the top of the rails. Between each pair of two tracks for road servicing is a locomotive floor level platform 10 ft. 8 in. wide and long enough to provide entrance to as many as three locomotive units. With this arrangement only two platforms are required to permit floor-level entrance to diesel units on any of the four servicing tracks.

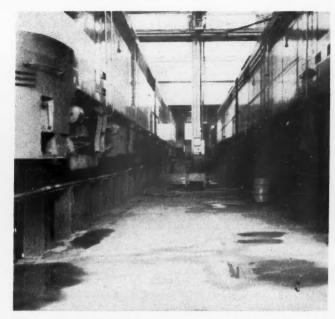
The four tracks for servicing road power are numbered

How Missouri Pacific For Heavy

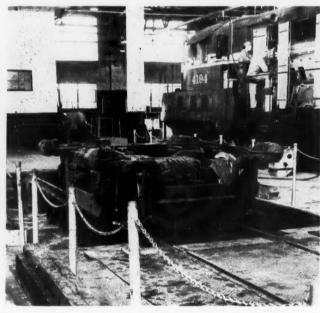
4. 5. 6 and 7. with the track numbering beginning at the north end of the shop. Tracks 1. 2 and 3 are used for servicing and heavy repairs to switchers. Track 8 is the drop-pit service track. Track 9 is the release track and has a pit at the stub end with elevated rails for making repairs to trucks. Tracks 10 and 11 are for wheel and truck storage. Track 12 is primarily a material



Looking at the east, or locomotive entrance, side of the Missouri Pacific Kansas City diesel shop.



The rails of the servicing tracks are $3\frac{1}{2}$ ft. above the surrounding floor level.



Truck repairs are facilitated by this pit with elevated rails on the drop-pit release track.



One platform between each of the two pairs of servicing tracks permits access to one side of the cab of any unit.

Converted Steam Shop Maintenance Work on 192 Diesels

track for unloading heavy parts from freight cars; it can also be used for such heavy locomotive work as lifting an engine out of a locomotive. All tracks except No. 3 are stub end, with locomotives entering and leaving from the east end through electrically operated overhead steel doors. Track 3 extends through the shop and out the west end.

The general foreman's office is near the western wall at about the mid-point of the north-south dimension of the building. From this location almost any operation in the shop can be seen. The parts repair room and the cleaning room are on the level of the locomotive floor platforms. This elevation was decided upon because most of the heavy work done at the Kansas City shop is on

road power and switching locomotive parts only have to be hauled up and down the ramps between the upper and lower floor levels. All ramps have a 15 per cent

grade.

An elevated platform 16 ft. by 37 ft. is mounted 16 ft. above the floor along the south wall near the southeast corner of the building. The platform conserves needed floor space by making available a storage area for crankshafts, hatch covers and other large bulky parts. The area underneath this platform will be devoted to repairing automotive equipment, including tractors, three road trucks and over a dozen shop trucks for the diesel and the car departments at Kansas City. Complete modern garage equipment will be installed for handling all types of repairs to this equipment. A small extension of the building south of the wall houses a foremen's locker room complete with shower and lockers.

No Major Structural Changes

Construction work to adapt the steam shop to diesel servicing and repairs was minor in nature with the exception of the four servicing tracks and two platforms. The existing shop building had 13-in. brick walls and was structurally satisfactory. To brighten up the interior, the walls were sandblasted and then painted throughout with aluminum paint. All windows of the old building were removed and replaced with glass block, and new interior lighting was installed. The new illumination comes from twin units suspended from the roof beams, each twin unit having one mercury vapor light and one incandescent bulb. This combination produces light close to natural daylight.

A Whiting drop table for handling four-wheel trucks was installed and the shop floor was raised two feet. The raising of the floor provided deep pits for working on the switching locomotives on Tracks 1, 2 and 3. These were originally 2 ft. deep in the steam shop, and are now 4 ft. deep. The two overhead traveling cranes were left in place; one has a 25-ton hoist, the second a

5-ton hoist.

Four individually controlled exhaust fans are mounted above each of the four servicing trucks, or a total of 16. Four more are mounted over each of Tracks 1, 2, 3 and 8, the three switcher tracks and the drop pit service track, and one is installed in the electrical shop. Each of these fans has self-closing louvers to avoid loss of heat when the fan is not in operation. All are 30 in. except the westernmost fan on each of the four service tracks which has 36-in. openings. The operating panels of all of the fans are assembled in a single operating center.

To further conserve space all benches are made to serve a dual purpose. Instead of having a bench to work on and a second for storing the tools, all benches have a storage space underneath the working surface, although in some cases the tools stored may not be the same ones used for the work done on the bench. Rubber mats are laid around the floor surrounding the benches

for the workmen to stand on.

An immediate check of the men available to work on any particular day and the job each is assigned to is available by looking at a board which shows for each man his name, card number and the days of each week he has off. When a man changes his job the strip merely has to be moved to show his new location.

Safety and cleanliness are emphasized. Safety posters are mounted adjacent to the time clock and at other locations where men gather. The shop floor is kept clean

by a steam jenny and a vacuum cleaner.

The first large group of locomotives serviced and maintained at Kansas City are 52 Alco road freight A-units

and 22 B-units. These 74 units cover all assignments north of Kansas City, going to Omaha and Stockton, Kan. As many of the 74 units are used on these two routes as are necessary to handle the traffic; the remainder run to other points.

The units not required on the northern runs operate to and from Wichita, Kan., and to and from St. Louis, returning directly to Kansas City. Others proceed from St. Louis to Memphis to Little Rock, reversing back to Kansas City via Memphis, Little Rock and St. Louis.

The second group of locomotives maintained and serviced at Kansas City comprises 24 Electro-Motive GP-7 road switchers. These 24 "jeeps" handle all local freight on the Omaha and Northern Kansas lines. Seven have heating boilers and take turns handling a local passenger train in each direction between Kansas City and St. Louis. All but 4 of the GP-7's are radio equipped, as are 23 of the Alco A-units.

Twelve more GP-7's assigned to local freight service between Kansas City and St. Louis make up the third large group of locomotives maintained at Kansas City.

Another group of locomotives maintained and serviced consists of 44 switchers working in and around Kansas City. Heavy maintenance work only is done on seven 1,200-hp. switchers located at Omaha, four at Atchison, Kan., two at Nevada, Mo., three 600-hp. switchers stationed at various small points and 22 GP-7's which handle local freight on the line from southern Missouri into northern Arkansas. This makes a total of 192 locomotives assigned to Kansas City for maintenance.

Turn-around service is given to 12 Baldwin road freight units which operate between Kansas City and St. Louis and are maintained at the latter point. Trip service is given to an average of 24 freight units per day which operate from the east through Kansas City to Denver and Ft. Worth. Locomotives used in passenger service, other than the GP-7 on the one local run, are handled in emergencies only.

About half of the total work falls on the first shift, with the second and third shift combined having about the same number of men as the first shift. A total of

slightly over 400 men are normally employed.

Types of Work Done

All truck work is performed except that individual wheels are not bored at this shop. Wheel sets are turned in the adjacent car shop. Body work, including painting, is also handled completely, except where a locomotive has been in a serious wreck and the underframe knocked out of alinement.

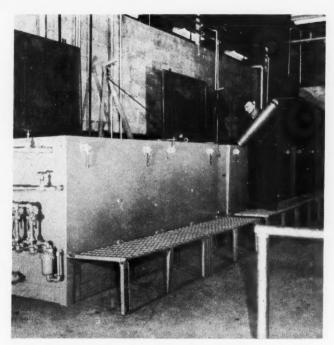
Diesel engines are overhauled completely, including realining the frame as necessary, but excluding crankshaft regrinding. The engines are rebuilt completely with purchased parts except for a few high-precision parts which are handled by unit exchange. In rebuilding engines, stretch gages are used on the connecting rod and the main bearings while torque wrenches are used on

all other bolts.

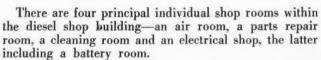
Major traction motor work is not done. The traction motors are sent out for unit exchange after 350,000 miles of operation. Main generators are also maintained through unit exchange once every seven years for road power and after eight years of service on switchers. The principal work done on traction motors and main generators is in the nature of changing field coils, replacing brushes and stoning commutators.

Smaller motors, including traction motor blowers, are worked completely except where armature rewinding is necessary, which is done outside. All controls are re-

paired with purchased parts.



Looking down the north wall of the cleaning room toward the rinsing station in the corner.



The air room is unusually neat and compact, occupying an area only 21 ft. 3 in. by 22 ft. to perform the equivalent of 19 annuals per month on 24RL equipment. There is a continuous waist-high long bench along the north wall with a cupboard facing it for tools, gaskets and parts. Immediately above the cupboard are air outlets and electrical outlets for power tools. Roller-mounted facing plates for lapping valve seats slide out at working height just below the top of the bench. Two 40-in. traveling floor lamps are suspended from a small overhead cable so they can be moved lenthwise along the bench to supply maximum illumination where desired.

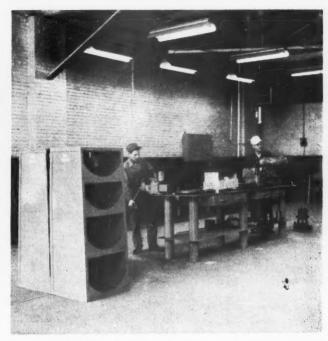
The cupboard is 2 ft. high with the top flat. This serves as a storage area for the workman using the bench; the part is on the bench, the materials are behind it in the cupboard, and the tools are on the top of the cupboard. Additional storage space for gaskets is provided by an enclosed gasket rack along the west wall. This rack, while only 4 ft. across, $2\frac{1}{2}$ ft. high and 6 in. deep, contains a 30-day supply of all gaskets. The gaskets are mounted both along the wall side of the rack and on the inside of the two doors,

The test rack is behind the workbench so that the workman merely has to turn to test the part he has just repaired. The room also contains a small cleaning vat, a steel storage bin for repaired parts and a two-tier bench 4 ft. square with linoleum covering for incoming parts.

The parts repair room is 55 ft. by 30 ft. and is equipped with a U-shaped overhead monorail to serve the three walled sides. The hoist has a capacity of 1,000 lb. The room contains the following equipment:

One bench set for calibrating Barco and Chicago Pneumatic speed recorders, on which all repairs are made.

A repair bench for injector spray nozzles, on which all repairs are made with purchased parts.



The neat well-lighted parts repair room, which opens directly into the cleaning room.



All were "riders" during January, February and March.

A water pump repair bench.

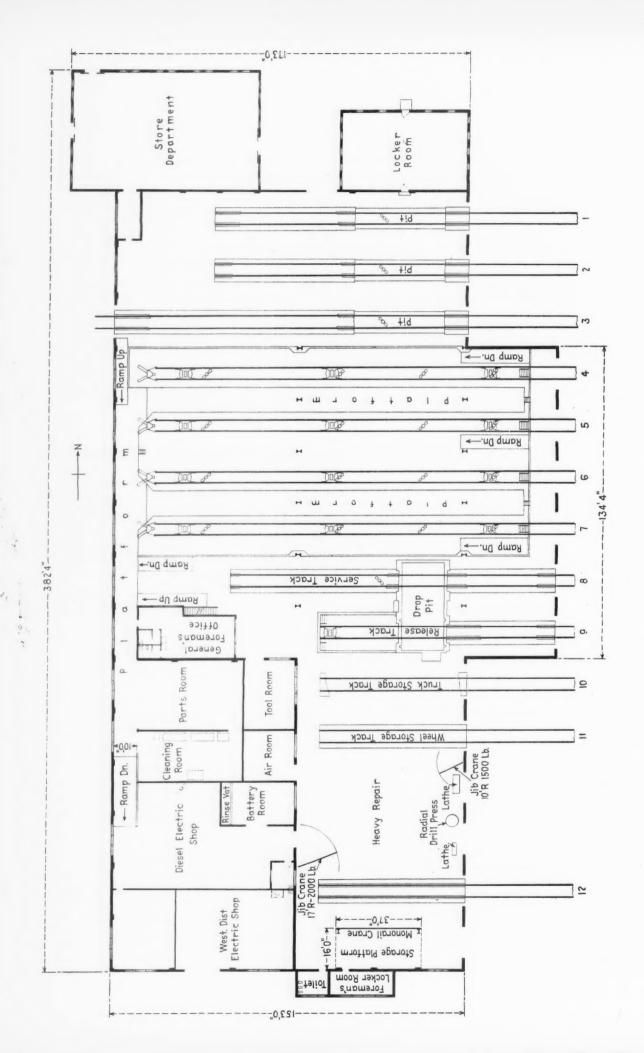
Two benches for repairing pistons and rods on different makes of engines, with a stand for repairing heads between the two benches.

A bench for building up Alco liner, piston and water jacket assemblies.

A drill press for miscellaneous work, a small arbor for pressing bushings in and out, a liner honing arrangement, Magnafluxing equipment, a valve and valve seat grinder and a bench for miscellaneous work.

Parts Cleaning Equipment

The cleaning room is located alongside the parts room and has an entrance directly into the parts repair room. The floor area is 22 ft. by 45 ft. Parts are handled by an overhead U-shaped monorail which serves the cleaning vat and the two adjoining sides of the room with a hoist of 1,000-lb. capacity. A Paxton-Mitchell centrifugal filter washer for 2-in. and 4-in. car body filters is located along the south wall. Also along the south wall is an Alco cleaner for circulating solution to clean out the oil passages and the outside of aluminum pistons. This cleaner handles 16 pistons at a time with a solution



Floor plan of the Missouri Pacific's new diesel shop at Kansas City.

temperature thermostatically controlled between 180 and

190 deg.

The remaining cleaning tanks are along the north wall. There are two large tanks 10 ft. long with a 40 in. square cross section containing heavy-duty cleaner for such parts as cast-iron pistons, liners and heads. The solution in these tanks is maintained at 180 deg. by a thermostatically controlled steam coil. A third tank with the same cross section but only 5 ft. long contains solvent emulsion type cleaner for valves, springs and rocker arms. A shop made vat in which the solution is air agitated handles oil suction screens.

At the end of the cleaning arrangements on the north wall is a rinse vat. The vat has a manifold into which steam, air and water are introduced with each controlled by a separate valve. The outlet of the manifold is fed into a conventional steam cleaning hose. With this arrangement any combination of steam, air and water can be obtained in any proportion. As changing hoses is avoided, little time delay occurs in switching from, for example, a steam rinse to blowing off a part with air; all that is necessary to make the change is to close the steam valve and open the air valve.

Two Electric Shops

There are two electric shops in the new diesel shops. One is used by electricians of the western district for electrical work not connected with diesel locomotives. The electric shop for diesel work is 80 ft. by 44 ft. and includes in one corner a battery room 18 ft. by 32 ft. The room contains one large bench for heavy items, one bench to test water coolers, five individual repair benches for all types of electrical work, three benches for radio and vibrator repairs, and a buffer and grinder. The battery room has a large rinse vat along one wall and a monorail crane with a 1,000-lb. hoist for handling the batteries.

Miscellaneous Shop Equipment

Several large machines used for steam locomotive repair operations were retained. A 32-in. by 96-in. lathe is used for refacing cylinder heads, liner boring and facing, and miscellaneous work on heavy parts. This lathe is located in the heavy repair floor area between Tracks 11 and 12. It is served by a jib crane with a 10-ft, radius and a 1,500-lb. hoist.

Next to the large lathe is a radial drill press for such heavy work as boring coupler pin sets. Miscellaneous small parts are handled on a second small lathe.

Cab and body work is handled on benches equipped to roll sheet steel up to $\frac{3}{8}$ in. in thickness. Other benches handle all other types of sheet metal work including flanging. A 17-ft. 2,000-lb. jib crane near Track 12, the material track, takes care of engine disassembling. Loads beyond the capacity of the jib crane are handled by one of the two traveling cranes.

Car-body filters are transported and stored in three filter trucks which can be easily moved by one man. Each truck has two tiers. Clean filters are stored in the top section, dirty filters in the bottom section. With these trucks there is no need for any other storage space for car body filters, and the extra operations necessary to handle the filters in and out of storage shelves is avoided. Storage time and space will likewise be eliminated for liner, head and piston assemblies by means of trucks to store and transport these items.

Facilities out of doors include a pair of Ross & White sanding towers and fueling facilities to serve two of the infet tracks to the house. Locomotives are cleaned with a Whiting washer supplemented by two Sellers washer injectors and by a Magnus stand to spray the trucks.

Oil storage capacities are 55,000 barrels of fuel and 20,000 gallons of lubricating oil. Heavy duty, or detergent, type oil is used exclusively and checked by a flash tester each time a locomotive comes into the terminal. Service limits on lubricating oil are 30,000 miles on road freight power and six months on switchers.

BENCH MARKS AND YARDSTICKS—12

One of the country's foremost students of industrial management not so very long ago gave a talk to some top-management people, in which he discoursed on the qualities they should look for in men being considered for promotion to managerial or supervisory positions. Here are the questions he said ought to be asked about any man being considered for advancement up the managerial ladder:

1. Can and does the fellow laugh at himself?—Look out for the man who can't or doesn't, because he is apt to be super-aware of the other fellow's faults and blind

as a bat to his own.

2. Does he live in the present, facing its actual problems—or is he nostalgic for the good old days, or other "ideal" conditions which do not match actualities and never will?

3. Does he have a habit of always giving more than he takes, or is he one of these fellows who never jumps into anything until he sees clearly "what's in it for him"?

4. Is he patient with present frustrations, keeping his mind on a larger goal which present obstacles by no means render impossible of ultimate attainment—or is he easily discouraged by temporary disappointments?

5. Does he keep on repeating the same mistakes, or does he show conclusively that every error he makes is a step in his further improvement?

6. Does he direct his emotional dislikes to things bad enough to deserve hating—or does he get riled at little things, while the big ones leave him cold?

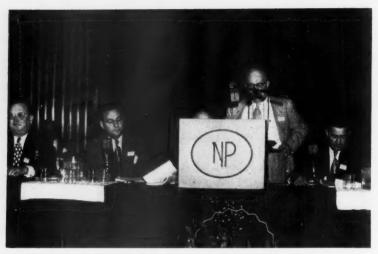
This list is, of course, over and above the candidate's technical qualifications; and in addition to his ability to get along with people. These two things, of course, are basic—nobody can be considered who doesn't have them, but qualities of mind and spirit going much beyond these elementary considerations seem to be required if performance above the level of mediocrity is to be expected.

Effective management is, pretty much, the keystone of the structure of freedom—political and economic as well. The forces tending to pull our economic structure down are powerful and pervasive. Management has to contend against these forces and, at the same time—using nothing stronger than example and persuasion—inspire people to work together to keep our productive processes in operating order, and constantly improving.

Without conscious effort and skill on the part of present management, in selecting and training its successors, tomorrow's management cannot possibly command the knowledge and character necessary to meet the exacting requirements of the jobs. No management, however successful it may appear today, can really be finally judged until its successors have been put to the test and proved themselves.



J. G. Haigh, joint Wabash, Milwaukee and Des Moines Union Terminal agent, took part in a skit, written by him, on telephone courtesy. To Mr. Haigh's right is V. F. Lowe, N.Y.C.-C.&O. agent and superintendent at Louisville; to his left, C. P. Blanks, Southern agent at Chattanooga.



Mr. Haigh at the microphone in another skit written by him. At the extreme left is W. G. Miller, agent of the Pennsylvania at Chicago, and chairman of the committee on station traffic. Next is Fred Mitas, agent of the Chicago, Rock Island & Pacific at Des Moines, while at Mr. Haigh's left is C. C. Cook, agent of the Western Weighing & Inspection Bureau at Des Moines.

Railroads Must Get Back L.C.L., Say Freight Agents

Baxter discusses tariff simplification program before Freight Station Section—Reduced rates on palletized I.c.I. shipments suggested

The members of the Freight Station Section of the Association of American Railroads, meeting in Cincinnati's Netherland Plaza Hotel, May 14-16, made it clear that in their opinions the railroads must get back l.c.l. traffic they have lost. In the minds of most of the more than 500 freight agents from the United States and Canada who were present, there seemed no doubts that the lost tonnage could be attracted back to the rails only if l.c.l. rates are reduced. Rate reductions, it was suggested, would bring back sufficient volume to make more through cars possible, thus giving patrons improved service which in turn would help attract even more business.

Aydelott on L.C.L.

J. H. Aydelott, vice-president, operations and maintenance, of the A.A.R., in addressing the opening session of the three-day meeting, told the agents that something must be done about the l.c.l. situation. He said that the latest figures indicated that l.c.l. tonnage in 1951 had declined to the point where it was only 0.7 per cent of total tonnage originated. He recognized that not all of this tonnage has been "lost," since much traffic that formerly went l.c.l. is moving via freight forwarders or by rail in other carload forms. Nevertheless, he said, altogether too much l.c.l. has been lost to the trucks and other competitors. Also, much carload traffic has been diverted to the highways. The freight agents, he said,

are the key figures in the railroads' drive to get back this business.

The truckers, Mr. Aydelott went on, have one big advantage over the railroads. The trucker, when he pulls up to a patron's place of business, through his driver makes a personal contact with the customer, while the railroad freight car cannot talk to the shipper o receiver. To counteract this highway carrier advantage, the A.A.R. vice-president suggested that agents extend themselves in their efforts to make more contacts with the buyers of transportation. When calling on patrons, Mr. Aydelott concluded, railroad men should not forget to talk with the shipping and receiving clerks as well as their superiors.

By far the largest part of the afternoon on the 14th, and of the two sessions on the 15th, were consumed in discussing the alarming decline in l.c.l. traffic and measures for getting back potentially "lucrative" business

Discuss Downward Revision

A downward revision of l.c.l. rates was much discussed as a necessary measure in regaining this traffic. Much discussion centered around a paper presented by the agents from Louisville, Ky., which advocated graduated incentive rates. That paper suggested rates based on two, three, five, seven and ten thousand pound shipments. "This," the Louisville agents said, "not only

would be an incentive for the shipper, but the return of high-class volume freight to the rails would permit: (1) Improvement in service; (2) overhead and direct destination cars, bypassing high-cost transfer points; (3) heavier average load in regularly scheduled merchandise cars; and (4) greater efficiency in station

operations."

There were advanced other rate proposals designed to recover l.c.l. The St. Louis agents suggested special rates to encourage palletization of this class of freight. Their proposal contemplated, "for example, a fourth class rate on freight, all kinds, in units weighing 400-1,500 lb. when dimensions do not exceed 4 ft. in length, depth or height; a third class rate on units weighing 250-1,500 lb., and measuring not over $4\frac{1}{2}$ ft. in width and depth, and 6 ft. high. . . . A returned carrier class [rate] might be provided on empty pallets returned."

The agents instructed their committee of direction to take up with chief executive officers of the railroads the group of papers on l.c.l., which included several on how to improve service in addition to those on rates. The various rate making bodies will be contacted also. It was the sense of the meeting that the managements of the railroads must decide whether or not they want the l.c.l. business. If they do want such traffic then rates and service must be provided which will get it back. The rates, however, the agents said, had to come first. An increased volume of business then would permit service improvements.

One agent stated on the subject of l.c.l. traffic that it was wrong for managements "to help the forwarders take l.c.l. away from the railroads." He drew considerable applause when he concluded his remarks by saying that if the managements decided to continue this policy that they should make the forwarders take all the l.c.l. business and not just the "cream" and the

shipments to the larger cities.

Billing "Stop" Cars

The old subject of stop-off cars (to partially load or unload) also was much in the limelight as usual, with both the loss and damage angle as well as the billing of such cars coming in for considerable discussion. Once again it was suggested that stop-off cars be billed to the stop-off point rather than to the final destination. In waybilling such cars, the agents proposed that the final destination and additional routing be placed under the information concerning the intermediate consignee. One agent said that he had been billing stop-off cars in this manner for many years, and he could not remember a case where a car so billed had been carried beyond the stop-off point. It was suggested further that agents at stop-off points mark waybills to indicate that the stop-off had been accomplished. This subject, too, the agents referred to the committee of direction with instructions to bring it before chief executive officers. if need be, to get some action.

The complicated tariff situation did not receive the discussion this year that it has at the last several meetings of the Freight Station Section. Considerable optimism was expressed that the work of the railroads' tariff research group would, in time, cure many of the tariff ills. C. S. Baxter, head of the tariff research group, was present at the meeting and told the agents he believed heartening progress was being made in finding solutions to many vexing problems involved in simplifying the railroads' price list.

The research group, Mr. Baxter said in discussing the objectives of his organization, is striving for uniC A. Naffziger, director of the A. A. R.'s new loss and damage prevention section, and a former member of the committee of direction of the Freight Station Section, spoke briefly to the agents, asking for their support of his new group.



formity in tariff make-up. Also, he continued, he wanted to make sure that the same things were said in the same way in all tariffs. Furthermore, uniform—and simple. understandable—rules and regulations would be applied to the tariffs.

There are cases, Mr. Baxter said, where rate structures make simplification almost impossible. In such cases, although the tariff research group has nothing to do with rate making, it would suggest to the chief traffic officers that changes be made which would make the rate structure more symmetrical so that the object of simplification could be achieved. Last, and far from least, said Mr. Baxter, his group seeks to eliminate the "multiplicity" of prices for the same service.

Mr. Baxter stated that he thought it should be obvious to everyone that the traffic executives are sincere in their desire to improve the tariff situation, since \$100,000 per year had been appropriated for this purpose. Already, too, he said in conclusion, the traffic executives have approved some proposals of the research group which will make publishing the tariffs more expensive

than has been the case heretofore.

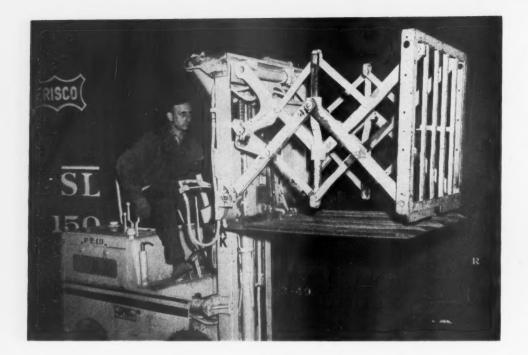
Loss and damage prevention, the subject of discussion on the morning of May 16, was said to be one of the best ways of pleasing the railroads' patrons, as well as a means of making money for the carriers. Section chairman W. L. Ennis, assistant to vice-president of the Chicago, Milwaukee, St. Paul & Pacific, in his opening remarks on the morning of the opening day, had said that the agent was the key man in making the railroads' loss and damage prevention programs effective. However, he continued, prevention results depend to a great extent on whether or not agency forces make out informative and accurate damage reports.

Reducing Claims

Mr. Ennis, who heads the Milwaukee's prevention forces as well as its station service department, hoped that in the future each agent would do his utmost to see that the quality of the O. S. & D. reports is improved. He also said that while he realized that agents could not be expected to inspect all cases of damage occurring in their territories he did think they could, and should, pay particular attention to traffic sustaining frequent or "repeater" damage.

One of the points stressed throughout the discussion

One of the points stressed throughout the discussion of methods of reducing the freight claim account was the uniform handling of inspections at all points served by more than one carrier. It was suggested also that wherever possible agents of the various carriers serving



This fork truck, equipped with pusher, is used by the St.L.-S.F. at its Springfield, Mo., transfer. Obscuring the forks is the take it-leave it-or retain it pallet.

an industry should make calls, together, on patrons so that the customer would know that the carriers' thinking on prevention matters is uniform.

Paperwork and mechanical kandling of freight also got a lot of attention at the meeting. V. B. Gleaves, superintendent of stations of the St. Louis-San Francisco, presented a paper in which he described the Frisco's method of handling l.c.l. with a fork truck and a "take it—leave it—or retain it" pallet. [This operation was described in an illustrated article in Railway Age of February 4.] This handling system, Mr. Gleaves said, has enabled the Frisco to increase production substantially at its Springfield, Mo., transfer.

A paper presented by the Chicago agents advocated the use of electronic dictating machines to "grab" car numbers from inbound trains. This system was described as both economical to operate and a fine way to improve service by enabling yard forces to handle trains with greater dispatch.

The New Orleans agents presented a revised form of switching settlement statement, designed to cut down the work of preparing these statements. The Freight Station Section went on record as favoring the adoption of this form, which includes a column for per diem reclaims, but suggested a further combination of this form be made with the interchange report form.

Two papers presented to the committee on station office operation expressed the opinion that the carriers should charge a fee for handling Order Notify bills of lading, much as is done in handling C.O.D. shipments. This charge was proposed as an addition to the bill of lading penalty charge now assessed when that document is not presented by the "notify" party within 24 hours after arrival of the car or shipment. While no vote was taken on this subject opinions expressed from the floor did not favor the proposal. The thinking seemed to be that already the railroads were making it too difficult for their customers to do business with them, and that this situation should not be made worse.

Discussions of the dockets of the four standing committees were presided over by the respective committee chairmen (committee on station office operation—H. A. Freeman, agent, Grand Trunk Western. Chicago: com-

mittee on station and terminal operation—J. F. Kohout, agent, Chicago & North Western, Proviso, Ill.; committee on loss and damage—A. E. Ward, agent, C. M. St. P. & P., Galewood, Ill.; and committee on station traffic—W. G. Miller, agent, Pennsylvania, Chicago).

Letter from a Reader . . .

More Diverse Routings For Round Trips Urged

ISLIP, N.Y.

TO THE EDITOR:

The present procedure for ticketing to Florida points limits round-trip tickets to same routing both ways. Many times, when trying to book a round trip, we find that, because we can't secure reservations on the return, we lose the return portion of the trip—and in some instances lose the whole sale. Most people today like to be assured of accommodations when traveling. When a patron is told that there is nothing available for his return trip, he commences to worry about it—and consequently his thoughts turn to other forms of transportation.

My own experience prompts me to suggest a diverse routing on all round-trip tickets to Florida. A diverse routing will give the patron better opportunity of securing his reservations with choice of several more trains. May I stress my point in saying that this condition does not exist only on the last-minute request for tickets and reservations. As a matter of fact, on a round-trip ticket sold two months ago, the party still has no return reservations. I can think of no better way to discourage rail travel than by restricting and limiting a patron, who has an advantage by buying a round-trip ticket, yet cannot use his return rail ticket because he cannot get return accommodations. Passengers confronted with situations like this, may even seek the "black market" speculator. Employees are tempted sometimes with money to employ illegal and unethical business practices. If the patron were allowed a diverse routing on his round-trip ticket, the chances are that it would eliminate this problem.

S. R. JONES Ticket Agent, Long Island

Railroads Lost 29.5 Per Cent of "Potential" Freight Tonnage Between 1928 and 1949

Between 1928 and 1949, the Class I railroads lost 29.5 per cent of their "potential" freight tonnage. That is the extent to which they failed in 1949 to maintain their 1928 position as carriers of freight originating from

production in this country.

This was shown by the latest study of "Fluctuations in Railway Freight Traffic Compared with Production," which has been issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The study is statement No. 5212, and it bears the usual disclaimer to the effect that it was not considered or reviewed by the commission. It was prepared by Leroy E. Peabody under the supervision of C. S. Morgan, both of the bureau's staff.

Based on New Classification

It is the first such study issued since 1948, and the first to be based on the new freight commodity classification which became effective January 1, 1947. It takes the year 1946 as the base for its index numbers, but it also has a table showing, for the 1928-1949 period, the annual ratios of actual railway tons to potential railway tons on the "old" base, i.e., on the basis of 1928 as 100. The 29.5 per cent tonnage loss noted above was calculated from that table, which showed that 1949's actual tonnage was only 70.5 per cent of potential.

On the new basis, with more detailed figures, the study showed that the Class I roads in 1949 failed by 179.7 million tons to maintain their 1946 position as carriers of freight originating from the country's production. The 1949 revenue loss, on the basis of that year's average of \$5.98 per ton, was thus about \$1,075

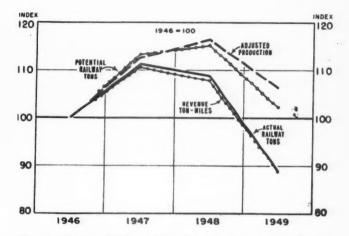
million.

Potential tonnage is the amount the railroads would have carried if they maintained their 1946 position. Against this potential tonnage, the actual traffic is set up; and the difference between the two measures the railroad loss. If the railroads had maintained their 1946 position, they would have carried in 1949 a total of 1,414,770,188 tons. Actually, they carried 1,235,073,519 tons.

\$11/2 Billion Annual Revenue Loss

The 1948 study showed that the railroads in 1946 failed by 234,237,000 tons to maintain their 1928 position. The loss in 1946 freight revenue was put at about \$539 million. (Railway Age of October 16, 1948, page 71.) If this be added to the \$1,075 million revenue loss which the railroads suffered in 1949 for having failed to maintain their 1946 position, their 1949 revenue loss for having failed to maintain their 1928 position would become more than \$1½ billion.

The indices bottomed on 1946 as 100 showed that the 1949 tonnage should have been 102.2 per cent of the 1946 basis if the railroads held their own. Actually, the 1949 tonnage was only 89 per cent of the 1946 basis.



The trend since 1946—adjusted production compared with actual and potential railroad tons and revenue ton-miles.

Thus, in the new 1946 series, the 1949 ratio of actual to potential tons was 87.0. The 1948 ratio was 94.5 while that of 1947 was 98.1.

The new series' data by commodity groups showed the following 1949 ratios of actual tons to potential tons: Products of agriculture, 97.3; animals and products, 70.2; products of mines, 76.9; products of forests, 81.3; manufactures and miscellaneous, 81.1 per cent; all l.c.l. freight, 48.6. The breakdown of the data by commodity classes showed that the 1949 traffic in 198 classes was less than the potential tonnage, while the actual tonnage was greater than the potential in 57 classes.

For-Hire Truckers Gained

While the bureau noted that its study did not contemplate the allocation of the railroads' tonnage losses to each competing agency, it did find "considerable evidence" that much of the lost business went to for-hire truckers. In that connection, the study had a table showing that the traffic of intercity motor carriers has grown nearly twice as fast as railroad freight traffic since 1939. On the basis of the latter year's intercity ton-miles as 100, the 1950 truck-traffic index was 322.3. The 1950 index of railroad ton-miles on a like basis was 176.5.

As other evidence of the loss of traffic to motor carriers, the study included another table showing that the railroads' 1949 (passenger-train) revenue from milk traffic was only 27.9 per cent of the comparable 1928 revenue—\$10.2 million as compared with \$36.7 million. This drop of more than 70 per cent came in a period when the amount of milk produced on farms was increasing 24.2 per cent. "Practically all of the lost traffic has gone to the trucks," the bureau said.



(Continued from page 18)
of industrial development, Denver &
Rio Grande Western; second vice-president, R. O. Robertson, general real
estate agent, Chesapeake & Ohio; and
secretary-treasurer, P. R. Farlow, general agricultural agent, Illinois Central.

Railroad Enthusiasts, Inc., New York Division, will hold its next meeting on May 28, at 8 p.m., in Grand Central Terminal, room 5928. R. B. Thomas, special representative of the Canadian National, will speak on "The Railroads Made Canada." In addition, two movies from the C.N. will be shown—"Song of the Mountains" and "The Big Island."

SUPPLY TRADE

M. W. Smith, president of the Baldwin-Lima-Hamilton Corporation, has announced that the Lima division and the Austin-Western Company, a wholly-owned subsidiary, have been combined into one internal operating unit, the Construction Machinery division. Products of both organizations will continue to be sold under



Frank G. Penl, formerly sales manager of transportation finishes of the Mc-Dougall-Butler Company of Buffalo, N. Y., has been appointed sales manager of the company. He will continue to manage transportation finish sales in addition to supervising all other sales activities of the firm.



John W. Porter (left), export manager of the General Railway Signal Company, has been appointed director of foreign sales, with headquarters at Rochester,



N. Y. Walter J. Plogsted (right), export vice-president, who has retired after 46 years of service with the firm, will be retained as export consultant.

present names and trademarks. McClure Kelley will be general manager of the division and will continue as president of Austin-Western. Henry F. Barnhart has been appointed assistant general manager of the division and will continue as vice-president of Baldwin-Lima-Hamilton and general manager of the Lima Works. Ralph K. Stiles has been appointed director of sales of the division and will continue as executive vice-president of Austin-Western.

Goff Smith, sales engineer in the New York office of American Steel Foundries, has been granted a leave of absence to attend the School of Industrial Management of the Massachusetts Institute of Technology, under a fellowship award of the Sloan Foundation program. John M. Whalen, associated with the Army Transportation Corps, has joined the sales staff as mechanical assistant.

Joseph M. McNamara has been appointed general manager of the Journal Box Servicing Corporation at Indianapolis, Ind.

The Diesel Engine Sales division of General Motors Products of Canada has been moved from Oshawa to General Motors Diesel, Ltd., at London, Ont. The transfer is part of the policy of combining Canadian sales and distribution of G. M. diesel products at the London plant.

ucts at the London plant.

Under Norman H. Daniel, manager of the Diesel Engine Sales division at Oshawa, the entire staff of 15 persons has been assigned to General Motors Diesel, Ltd. It includes Russell Gage, sales manager of the division; R. William McEachran, parts and service manager; and a field force including district sales managers at Vancouver, Edmonton, Toronto, Cornwall, Montreal, and Moncton, N.B. Mr. Daniel has been appointed director of sales of the new Engine Sales division,

and William M. Warner, assistant to president of G.M.D. since its formation in 1949, has been appointed assistant director of sales.

W. Lyle Richeson, whose election as vice-president of the Westing-house Air Brake Company was announced in last week's Railway Age, will assume his new duties, with head-quarters at Wilmerding, Pa., on June 1. Mr. Richeson completed three years in mechanical and electrical engineering at Tulane University and was graduated in 1924 from Sheffield Scientific School, Yale University, with a B.S.



W. Lyle Richeson

degree in administrative engineering. He began his business career in 1925, when he joined the American Car & Foundry Co. He advanced in its sales organization by establishing the Cleveland office, where he was successively district agent, representative and sales manager. Later, he was transferred to New York as manager of sales, subsequently becoming assistant vice-president and vice-president in sales.

The communications and electronics division of Motorola has announced

the opening on June 1 of a new West Coast parts and service department, with offices at 811 South B street, San Mateo, Cal. This new activity will be headed by **John Jipp**, formerly sales manager of the division's southwestern



John Jipp

states region. Mr. Jipp joined Motorola as a sales representative in 1945, after working four years as a senior radio engineer in the Signal Corps Laboratories in Fort Monmouth, N.J. E. Falls succeeds Mr. Jipp in the southwestern states region, including Texas, Oklahoma, Arkansas, Louisiana and New Mexico.

Frank J. Staroba, formerly midwestern district manager of the Carboloy department of the General Electric Company, has been appointed field sales manager, with headquarters at Detroit. L. L. DeCoster, formerly sales engineer in the Indianapolis and Chicago areas, has been appointed mid-western district manager at Chicago.

R. M. Jaccard has been appointed sales manager, industrial division, Bowers Battery & Spark Plug Co., Reading, Pa. Mr. Jaccard will be in direct charge of sales of all batteries for industrial trucks, diesel and mine locomotives, railroad lighting and similar installations.

Edward C. Sterling, Jr., has been appointed western division sales manager of the Townsend Company, with headquarters at the Cherry Rivet division offices in Los Angeles, to succeed Edward H. Stau, who has resigned.

William L. Wearly has been elected general sales vice-president, in charge of all domestic sales, including Canada and Mexico, for the Joy Manufacturing Company, Pittsburgh. Mr. Wearly joined the company in 1937 and has worked successively as service manager and vice-president, coal machinery sales.

Thomas R. Nugent, formerly central regional sales manager of the



Harry E. Orr (left), formerly assistant vice-president and manager of district sales for the Vanadium Corporation of America, has been appointed assistant vice-president and manager of engineer-



ing sales, with headquarters at Chicago. John B. Girdler (right), formerly regional manager at the Pittsburgh office, has been appointed corporation sales manager, with headquarters in New York.

Inland Steel Container Company, subsidiary of the Inland Steel Company, has been appointed to the newly created position of sales consultant. Gordon L. Sheehan, formerly assistant manager, has been appointed manager to succeed Mr. Nugent.

Stephen S. Conway has been appointed first vice-president of the Brake Shoe & Castings division of the American Brake Shoe Company. In addi-



Stephen S. Conway

tion to his new duties, he will continue as vice-president in charge of sales for the Brake Shoe & Castings and Southern Wheel divisions. Mr. Conway has been with the company since 1912.

The Union Switch & Signal Division of Westinghouse Air Brake Company has announced the following appointments, effective June 1: James J. Van Horn as assistant district manager of the Chicago district office, to succeed W. H. Horsch, whose death is reported elsewhere in these columns; J. I. Grammer as sales engineer at the New York district office, and J. W. Hansen as sales engineer at Swissvale, Pa.

The Independent Pneumatic Tool Company has inaugurated a new Thor industrial sales division and also has made the following appointments, to effect the new division's expansion of the sales department: J. A. Hill, manager of industrial sales; J. F. Corkery, manager of electric tool sales, to succeed Mr. Hill; and G. A. Thoma, sales promotion manager, to succeed Mr. Corkery.

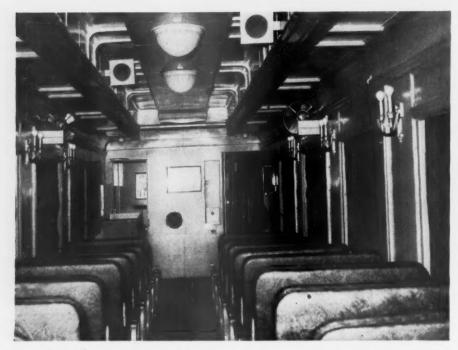
The Bogue Railway Equipment division of the Bogue Electric Manufacturing Company, has been appointed authorized distributor for DuKane Corporation sound products. The Bogue concern will distribute DuKane intercommunication and sound equipment to the railroad industry on a national scale, along with railway products manufactured by Bogue.

OBITUARY

W. H. Horsch, assistant district manager of the Union Switch & Signal Division of Westinghouse Air Brake Company, with headquarters at Chicago, died recently.

FINANCIAL

Chesapeake & Ohio.—Employees Stock Purchase Plan.—This road has applied to the I.C.C. for authority to issue and sell 300,000 shares of its common stock in connection with a proposed stock purchase plan for C. & O. employees. The plan's "prime purpose," according to the road, is to enable employees to acquire stock "as an incentive and to encourage employee ownership of the company's stock." The road already has a stock purchase plan for its officers, and the employee plan would be a "logical extension" of this



THE LEHIGH VALLEY'S NEW SAFETY INSTRUCTION CAR (below), originally a dining car, was completely remodeled—to the specifications of E. J. Flaherty, supervisor of safety—at the road's Sayre, Pa., shops. The 80-ft. car seats 38 persons and is scheduled for an immediate tour of the entire L.V. system over a seven-week period. About two-thirds of the car comprises the auditor-

ium and projection room (above), fully equipped to show educational safety films. The after-end of the car is equipped with an office and living quarters, complete with shower and hot and cold running water, for use by Mr. Flaherty while on tour. The car also will be used in claim and fire prevention work.



arrangement, the road said. Price of the shares would be determined by the market price on the day an employee files his application. C. & O. stockholders will vote on this employee plan at a special meeting in Richmond, Va., on June 18 (Railway Age, May 5, page 96).

Chicago & Eastern Illinois.—Stock Dividend.—This road has asked the I.C.C. for authority to issue 41,487 shares of common stock to pay an accumulated dividend of \$2 per share on the road's Class A stock. The road said its 1951 earnings were adequate to cover the dividend, but the board of directors decided to conserve cash and pay the dividend in common stock. Value of the newly issued common shares in paying off the accumulated

dividend would be set by the May 9 closing price on the stock market — \$18.50 a share.

Colorado & Southern.—Financing Approved. - Stockholders have approved the management's plan of refinancing and corporate simplification (Railway Age, February 25, page 70). Actual sale of \$17 million of Fort Worth & Denver first mortgage bonds at 98.78 for a 43/8 per cent coupon was made on May 14 to a syndicate headed by Morgan Stanley & Co. Proceeds are to go toward retirement of F.W. & D. funded debt (other than equipment obligations) and to the C. & S. in partial consideration for transfer of capital stock, bonds and other obligations of seven Texas subsidiaries.

Delaware, Lackawanna & Western.—To Request Seat on Nickel Plate Board.—William White, president of the D. L. & W., said at the recent annual meeting of stockholders that the Lackawanna will seek representation on the New York, Chicago & St. Louis board of directors. Interstate Commerce Commission approval for the move will be requested within a few months, he added. The request would be based on Lackawanna holdings of Nickel Plate common stock, which amount to about 14 per cent of the total.

Norfolk Southern.—Special Stockholders' Meeting. — At the request of a group of minority stockholders, this company has called a special stockholders' meeting, to be held on May 28. The minority group, which is said to represent approximately 10 per cent of the company's total outstanding stock, is said to be headed by William F. Knorr, who is a director of the company. The group's purpose in requesting the special meeting is reportedly "to reduce the number of directors from 18 to 11 and, in the event such action is taken, to remove the present board and elect a new one of 11 members." The company management, headed by Patrick B. McGinnis, chairman of the board, and Joseph T. Kingsley, president, have stated that they will oppose these proposals. As reported in Railway Age April 21, page 17, the "management, accounting, financial and other practices" of the N.S. are under investigation by the I.C.C. on the commission's own motion. The company management has not yet had its "day in court" to reply to testimony presented by I.C.C. witnesses, and contends that no meeting of stockholders should be held "to assess the stewardship of the present management" until after the I.C.C. has rendered its report.

Omaha, Lincoln & Beatrice. Trackage Rearrangement. - This road has asked the I.C.C. to approve a plan for rearranging a part of its trackage at Lincoln, Neb. The proposed change, the road said, would result in faster, better, safer and less costly service. The plan provides for abandonment of a 3mile segment through a congested area of the city, thereby eliminating several grade crossing hazards. The road would also construct a 400-foot segment to connect with a line of the Chicago. Rock Island & Pacific; and would lease 1.8 miles of additional trackage from the Rock Island. The leased line would be used in part to provide team track service to customers, the road said.

Pittsburgh & West Virginia.— Trackage Rights.—Division 4 of the I.C.C. has approved acquisition of trackage rights by this road over a 1.022-foot segment of the Pittsburgh, McKeesport & Youghiogheny at Connellsville, Pa. Use of this segment permits the P. & W.V. to maintain an interchange connection at Connellsville with the Western Maryland. It has used the segment since 1930, but



Don't take it for granted that high maintenance costs are a necessary brake beam evil. Over a billion car-miles with ASF Cast-Steel Unit Beams have proved just the opposite—and now you can get the economy of this same one-piece construction in hanger-type beams, too!

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A.A.R.-Approved Certificate No. 65

the previous agreement expired last September. The new agreement pro-vides for annual rental of \$30,000, in addition to a proportion of maintenance expenses.

New Securities

Application has been filed with the I.C.C. by:

CHICAGO & NORTH WESTERN.—To assume liability for \$6,555,000 of equipment trust certificates to finance in part 24 diesel-electric locomotive units and 650 freight cars. Estimated total cost of the equipment is \$8,204,200.

	Description	Estimated
	and Builder	Unit Cost
4	1,500-hp., "B" freight units	
	(Electro-Motive Division, General	
	Metors Corporation)	\$158,420
6	1,600-hp, road-switchers (Ameri-	
	can Locomotive-General Electric	
	Companies)	
8	1,600-hp. road-switchers (Fair	
	banks, Morse & Co.)	179,096
2	1,600-hp. road-switchers	
	(Alco-G.E.)	191,552
4	1,200-hp. switching locomotives	
	(Fairbanks, Morse)	
350	70-ton covered hopper cars (Pull-	
	man-Standard Car Manufacturing	
-	Company)	
300	70-ton ore cars (Bethlehem Stee	

The certificates would be dated July 1, and would mature in 15 annual installments of \$437,000 each, beginning July 1, 1953. They would be sold by competitive bids, with interest rate to be set by such bids.

Division 4 of the I.C.C. has author-

Division 4 of the I.C.C. has authorized:

CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA.—
To assume liability for \$990,000 of equipment trust certificates, to finance in part eight diesel-electric locomotives costing an estimated \$1,243,942. (Railway Age, April 21, page 76). Division 4's report approved sale of the certificates for 89.663 with interest at 31/4 per cent—the bid of R. W. Pressprich & Co. and three associates—which will make the average annual cost of the proceeds to the road approximately 3.33 per cent. The certificates, dated June 1, will mature in 15 annual installments of \$66,000 each, beginning June 1, 1953. They were reoffered to the public at prices yielding from 2.25 to 3.35 per cent, according to maturity.

DENVER & RIO GRANDE WESTERN.—To assume liability for \$4,440,000 of series R equipment trust certificates to finance in part 17 dieselelectric locomotives costing an estimated \$5,944,770 (Railway Age, April 21, page 76). Division 4's report approved sale of the certificates for 99.147 with interest at 23/4 per cent—the bid of Salomon Bros. & Hutzler and three associates—which will make the average annual cost of the proceeds to the road approximately 2.88 per cent. The eertificates, dated June 1, will mature in 30 semiannual installments of \$148,000 each, beginning December 1, 1952. They were reoffered to the public at prices yielding from 1.95 to 3 per cent, according to maturity.

NEW YORK CENTRAL.—To assume liability for \$5,220,000 of equipment trust certificates to finance in part 42 diesel-electric locomotive units and seven Budd rail diesel cars. Estimated total cost of this new equipment is \$7,078,940 (Railway Age, April 21, page 76). Division 4 approved sale of the certificates at 99.0366 based on interest at 31/6 per cent—the bid of Halsey, Stuart & Co. and nine associates—which will make the average annual cost of the proceeds to the road approximately 3.3 per cent. The certificates, dated May 15, will mature in 15 annual installments of \$348,000 each, beginning May 15, 1953. They we

Dividends Declared

BESSEMER & LAKE ERIE.—\$3 preferred, \$1.50, semiannual, payable June 1 to holders of record May 15.

CHICAGO, ROCK ISLAND & PACIFIC.—common, \$1, quarterly; 5% preferred, series A, \$1.25, quarterly, both payable June 30 to holders of record June 13.

GREAT NORTHERN.—non-cumulative preferred, \$1, payable June 20 to holders of record May 20.

20.
KANSAS CITY SOUTHERN.—common, \$1.25, quarterly; payable June 16 to holders of record May 29; non-cumulative preferred, \$1, quarterly, payable July 15 to holders of record June 30.
MAINE CENTRAL.—5% preferred, \$1.25, accumulated, payable June 2 to holders of record May 15.

Minneapolis & ST. Louis.—25¢, quarterly, payable July 13 to holders of record June 3.

NORFOLK SOUTHERN.—75¢, quarterly, payable June 16 to holders of record May 31. PITTSBURGH & LAKE ERIE.—\$2, payable June 16 to holders of record May 26. TENNESSEE, ALABAMA & GEORGIA.—25¢, payable June 14 to holders of record May 29. VIRGINIAN.—621/2¢, quarterly, payable June 20 to holders of record June 11. WEST JERSEY & SEASHORE.—guaranteed, \$1.50, semiannual, payable June 2 to holders of record May 15.

Security Price Averages

Average price of 20 representative railway stocks.. Average price of 20 representative railway bonds.. s.. 59.78 59.62 52.70 93.96 94.01 94.56

EOUIPMENT AND SUPPLIES

FREIGHT CARS

The Atlantic Coast Line has ordered 12 30-yard air dump cars from the Baldwin-Lima-Hamilton Corpora-

The Tennessee Copper Company has ordered six 30-yard air dump cars from the Baldwin-Lima-Hamilton Cor-

LOCOMOTIVES

May 1 Locomotive Order Backlog Was 1,493 Units

New locomotives on order by Class I railroads on May 1 totaled 1,493, the Association of American Railreads has announced. This order backlog con-sisted of 1,463 diesel-electric locomotives and 30 steam.

On May 1 a year ago Class I roads had 1,755 new locomotives on order, of which 1,733 were diesel-electrics, 18 steam and four electric.

In the first four months of 1952, Class I roads installed in service 883 new locomotives, the A.A.R. said. All of these were diesel-electric with the exception of four steam and one electric. Locomotives placed in service in the same four-month period of last year totaled 838. Four of these were steam units and the remainder diesel-

In April 1952, the roads placed 192 new locomotives in service, all of which were diesel-electric except one steam. In April last year, 219 locomotives were installed, including 217 diesel-electric and two steam units.

SIGNALING

The American Locomotive Company has ordered from the Union Switch & Signal Division of Westinghouse Air Brake Company 20 sets of four-indication coded cab signal and three-speed speed control apparatus to be installed on diesel switchers being built for the Pennsylvania.

The Chicago & Western Indiana has ordered from the Union Switch & Signal Division of Westinghouse Air Brake Company material to install a new all-relay interlocking at 47th street, Chicago. In addition to the control machine, the order includes styles H-5 searchlight signals, A-5 electro-pneumatic switch machines, relays, rectifiers, transformers and housings. Field installation will be handled by railroad forces.

The Gulf, Mobile & Ohio has ordered equipment from the General Railway Signal Company for installation of a coded remote control interlocking at Godfrey, Ill.

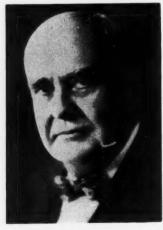
The Newburgh & South Shore has awarded a contract to the Union Switch & Signal Division of Westinghouse Air Brake Company for in-stallation of additional interlocking facilities at "BJ," Cleveland, to handle a new double-track crossing with the River Terminal. The contract covers additional controls for an existing style "C" machine, and installing H-2 dwarf color-light signals, M-3 electric switch machines, relays, rectifiers, transformers and housings.

RAILWAY OFFICERS

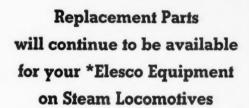
EXECUTIVE

John H. Lerbs has been appointed vice-president and general manager of the Hoboken Manufacturers Rail-ROAD at Hoboken, N. J.

Fred H. Hooper, general manager of the Kansas City Southern, has been elected vice-president and general manager. Joseph R. Brown, general counsel, has been elected vice-



J. L. Lancaster, chairman of the board of the Texas & Pacific at Dallas, Tex., since May 1939, has retired, after 67 years of railroad service. Mr. Lancaster served as president of the T. & P. from December 1919 until May 1945.



'includes parts for "American" multiplevalve throttles and "Bradford" throttles.

New and remanufactured Elesco superheater units have return bends that are free of internal or external weld ridges...ridges that cause unsafe tubing temperatures. When superheater units need heavy repairs, send them to our plant for remanufacture.

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president and general counsel. L. Orval Frith, assistant to the president, has been elected vice-president and executive assistant.

Thomas S. Masterson, chief clerk to the vice-president and general manager of the Missouri-Kansas-Texas, has been appointed assistant to the vice-president and general manager, succeeding E. D. Winslow, retired.

Mr. Masterson entered Katy service at Parsons, Kan., in 1919 in the shop accountant's office. Serving in various clerical jobs until 1928, he became



Thomas S. Masterson

chief clerk to the district engineer at Smithville, Tex. In 1931 he was appointed assistant auditor, timekeeper and agent, and in 1936 he moved to Dallas to become transportation inspector. He was named statistician in the vice-president and general manager's office in 1937 and chief clerk in the office in 1945.

OPERATING

R. G. Brill has been appointed trainmaster of the Louisiana division of the Texas & Pacific at Shreveport, La.

Frederick H. Boulton, Jr., assistant engineer of the LOUISVILLE & NASH-VILLE, has been appointed assistant to the general manager at Louisville, Ky.

James G. Metcalfe, assistant general manager of the Louisville & Nashville at Nashville, Ky., has retired. Mr. Metcalfe began his railroad career as rodman on the L. & N. in 1903. He subsequently served as a clerk, assistant trainmaster, trainmaster, and assistant superintendent, and in 1924 was appointed superintendent of the Cincinnati division. In 1936 he was appointed assistant superintendent of transportation at Louisville, and the following year was named superintendent of transportation. He became assistant general manager on March 1, 1951.

R. D. Shelton, superintendent of the Valley division of the Atchison, Topeka & Santa Fe at Fresno, Cal., has been appointed assistant general manager at Los Angeles. F. A. Baker continues as assistant general manager at that point. F. N. Stuppi, superintendent of the Plains division at Amarillo, Tex., succeeds Mr. Shelton. O. R. Hammitt has been appointed acting superintendent of the Los Angeles terminal and the Harbor district, succeeding J. P. Donovan, who is on leave of absence.

TRAFFIC

R. A. Patterson has been appointed general passenger agent of the Long Island, with headquarters in Pennsylvania Station, New York.

Stanley B. Hitchings, assistant general passenger agent of the Boston & Maine, has been appointed general passenger agent at Boston, effective May 16, succeeding Edward P. Shaw, who has retired after 48 years of service. Malcolm H. Allen has been appointed assistant general passenger agent and Wilfred P. Currier, assistant to the general passenger agent. Mr. Hitchings joined the B. & M. in 1923 as a messenger and rose through various positions in the road's traffic department. On December 29, 1950, he was appointed assistant general passenger agent, the position he held at the time of his recent appointment.

Mr. Shaw joined the B. & M. in 1904 as a clerk messenger, serving as chief clerk, chief rate clerk and assistant general passenger agent in charge of rates. He was made general passenger agent on March 3, 1947.

Carl V. Ahlgren has been appointed general agent for the CHICAGO & EASTERN ILLINOIS at San Francisco.

E. F. Schier, general freight agent for the New York, Chicago & St. Louis at St. Louis, has been appointed freight traffic manager, succeeding the late C. R. Deets. H. Easterday, assistant general freight agent at Chicago, succeeds Mr. Schier, while H. E. Draper has been named to succeed Mr. Easterday. O. J. Benes has been appointed general agent, succeeding Mr. Draper.

Entering railroad service in 1920 as traveling freight agent for the Nickel Plate's predecessor, the Toledo, St. Louis & Western, Mr. Schier became district traffic agent at Louisville, Ky., in 1924. He later served as district traffic agent at Seattle, Wash.; general agent at Seattle and Detroit, and was appointed general freight agent at St. Louis in 1949.

Mr. Easterday entered Nickel Plate service as chief clerk to the district traffic agent in St. Louis in 1922. Later he served in various traffic department positions at St. Louis, Dallas, New York, San Francisco and Salt Lake City. He was appointed assistant general freight agent at Chicago in 1949.

E. D. Bell, city passenger agent for the CANADIAN NATIONAL at Vancouver,



lan Warren, passenger traffic manager of the Canadian Pacific at Montreal since 1949, has been appointed general passenger traffic manager, effective June 1.

B.C., has been appointed district passenger agent for the province of Alberta.

J. T. Hartnett has been appointed general agent of the MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE at the new Philadelphia address, 710 Bankers Securities building. Mr. Hartnett succeeds D. C. Simpson, who has been transferred to the newly established separate office in room 627, Grant building, Pittsburgh. C. A. Johnson has been appointed general agent at a newly established office in room 604, Ellicott Square building, Buffalo.

B. G. Cartwright, division passenger agent of the Southern at Chattanooga, Tenn., has been promoted to assistant general passenger agent at Cincinnati, succeeding Howard D. Lyons, who will retire on June 1, after more than 43 years of service. W. W. Williams has been promoted to district passenger agent at Memphis, succeeding F. H. Boone, who succeeds Mr. Cartwright at Chattanooga. William T. Shivell, commercial agent, has been promoted to district freight agent, with headquarters as before at Miami, Fla.

George Childers has been appointed general coal freight agent for the New York Central at Cincinnati.

H. K. Willson has been appointed general agent for the MINNEAPOLIS, St. Paul & Sault Ste. Marie at Birmingham, Ala.

Henry E. Reed, Jr., has been appointed assistant geologist for the GREAT NORTHERN, at Williston, N.D. He was formerly geologist with the Amerada Petroleum Corporation at Williston.

Patrick J. Meade has been appointed acting general agent of the

Hoboken Manufacturers Railroad at Hoboken, N. J., succeeding Robert Geissler, resigned.

E. L. Robison has been appointed general agent for the MISSOURI PACIFIC at Cape Girardeau, Mo., succeeding the late R. Burford.

MECHANICAL

G. S. Gandy, master mechanic of the St. Louis Southwestern, has been appointed assistant superintendent of motive power, with duties as before. M. P. Nunnally, assistant superintendent, has been appointed engineer of motive power. Both are stationed at Pine Bluff, Ark.

PURCHASES & STORES

J. A. Jost, assistant purchasing agent of Canadian Pacific Air Lines (Repairs) Limited, at Calgary, Alta., has been appointed to the same position for the CANADIAN PACIFIC at Edmonton, Alta., succeeding P. G. Clendenning, transferred to Montreal.

G. M. Huffman has been appointed storekeeper of the Chesapeake district of the CHESAPEAKE & OHIO at Presque Isle, Toledo, Ohio, succeeding O. C. Fowble, who has been named division storekeeper of the Chesapeake district at Peru, Ind. (Railway Age, May 19, page-187).

ENGINEERING AND SIGNALING

J. W. Curran, assistant signal engineer of the Boston & Albany at Boston, has been transferred to the New York Central, at New York, with jurisdiction over Grand Central Terminal, and the Electric, Harlem, Putnam and River divisions.

A. G. Rankin, assistant engineer in the bridge department of the Texas & Pacific at Dallas, has been appointed bridge engineer, succeeding C. P. Howes, retired.

Mr. Rankin first entered T. & P. service in 1928. From 1938 to 1944 he was designing engineer for the Texas state highway department, returning to the railway in 1944 as assistant engineer. He is a graduate of Vanderbilt University, with a bachelor of engineering degree.

Graduating from Massachusetts Institute of Technology with a degree of bachelor of science, Mr. Howes entered the engineering field in 1904. He served overseas in World War I with the army engineers from 1918 to 1919. He came to the T. & P. as bridge engineer in 1919, and served in this capacity until his recent retirement.

Greely R. Sproles, division engineer for the LOUISVILLE & NASHVILLE at Mobile, Ala., has been appointed assistant engineer in charge of the chief engineer's miscellaneous depart-

ment at Louisville, Ky. Charles E. Stoecker, assistant division engineer, has been appointed to succeed Mr. Sproles. Ralph H. Gunter, draftsman, has been named assistant engineer in the office of the chief engineer at Louisville.

SPECIAL

W. G. Kelly, assistant manager of personnel for the Southern Pacific at San Francisco, has retired after 48 years of service.

W. V. McCarthy, assistant to general manager, New York Central,

Lines East, at Syracuse, N.Y., has been appointed assistant general manager-personnel, with the same headquarters.

H. Brad Atwood, news editor of the Pacific Electric, has been appointed assistant public relations director, succeeding the late Glenn E. Collins.

OBITUARY

William G. Casley, traffic manager of the Toledo, Peoria & Western at Peoria, Ill., died May 10 in Canton,

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Locomotive Steps

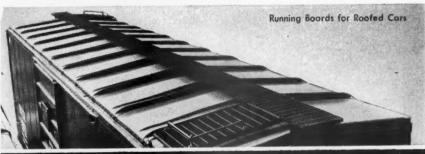


Brake Steps

Railway Equipment and Grating Departments

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Current Publications

PAMPHLETS

More Pay Dirt!, prepared by the Development Service of the Atlantic Coast Line. 20 pages, illustrations, maps. Available from V. W. Lewis, Manager, Agricultural and Livestock Development, Atlantic Coast Line Railroad Company, Wilmington, N.C.

Outlines opportunities for farming, cattle-raising and forestry available in south Florida, particularly in Hendry and Collier counties, and briefly discusses soil mapping, rainfall, water control and minimum frost hazards.

Bus Facts, 20th Edition, 1951. 68 pages. National Association of Motor Bus Operators, 839 17th st., N.W., Washington 6, D. C. Free.

This booklet, published annually, is designed to provide a convenient summary of more important facts about the intercity bus industry. In general, the statistics, which cover volume of traffic and service, operating results, revenues, expenses, employment and wages, are complete and final up to the end of 1949. In most instances preliminary data for 1950, based on such reports as are available, have been included. Data on taxes on highway users and state regulations are also included.

Motor Truck Facts, 1951 Edition. 56 pages. Automobile Manufacturers Association, New Center Building, Detroit 2, Mich. Free.

In addition to the usual data on production, sales, exports, registrations and transportation by trucks presented in this, the ninth edition of "Motor Truck Facts," new data available for the first time from the United States Census Bureau show the number of trucks owned by various in-dustry groups and by retail and wholesale trades, and data on retail sales by dealers by states.

The Railroad. 34 pages, illustrations. Public Relations Department, Atchison, Topeka & Santa Fe, 80 East Jackson blvd., Chicago 4. Free.

Using Santa Fe pictures almost entirely. this booklet tells the story of American railroading in a manner useful to teachers and to students beyond the primary grades. Although it paints the traditional picture of how railroads began, how they opened the West, etc., later chapters de-pict "Careers on Wheels," "The Import-ance of Railroads," "If You Had Your Own Railroad," "Railroads in Crises," etc. -important, thought-provoking material that is frequently overlooked in booklets of this sort.

Bulletin No. 85. 72 pages, illustrations. Railway & Locomotive Historical Society, Baker Library, Harvard Business School, Boston, Mass. \$1 to members; \$2 to nonmembers.

Leading off this issue is an article on the railroads that formed a part of the present Western Maryland, which is cele-

brating its centennial this year. The railroads are the Pennsylvania Railroad in Maryland, the Georges Creek & Cumberland, the Connellsville Extension and the Cumberland & Pennsylvania. Other articles include a hail and farewell to the American Locomotive Company's experimental locomotive No. 50,000, built in 1910 and scrapped in 1950; American built locomotives in New South Wales; the Ontario, Simcoe & Huron; narrowgage locomotives in western New York and Pennsylvania; the Hudson River bridge; the Manchester, Dorset & Granville; and the Boston and Mt. Desert Limited.

Emory Richard Johnson Memorial Volume. Compiled and edited by G. Lloyd Wilson. 60 pages. Appleton-Century-Crofts, Inc., 35 W. 32nd st., New York 1. \$1.50.

This attractively produced booklet has been issued as a memorial to Emory R. Johnson, the author of many text books, monographs, papers and other publications in the transportation field, and a former dean of the Wharton School of Finance of the University of Pennslyvania. It contains a biography of Dr. Johnson; a resolution presented to and adopted by the faculty of the Wharton School; a bibliography of his principal published writings from 1903 to 1947; and a 50-page discussion of national transportation policies regarding government aid and regulation, written by Dr. Johnson, with editorial revisions by Dr. Wilson.



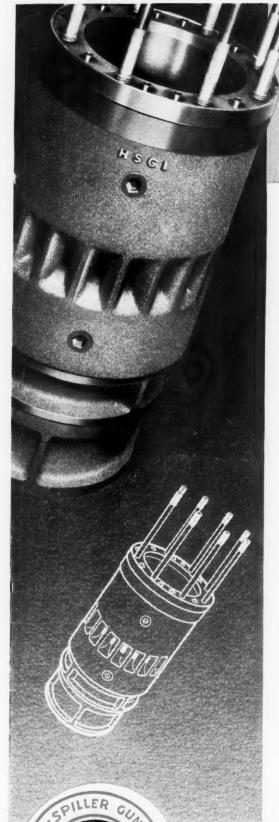
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Freight Operating Statistics of Large Railways — Selected Items

				Locomotive-Miles		Car-Miles		Ton-miles (thousands)		Road-Incos. on lix			ne	
Region, Road and Year		Miles of road	Train-	Principal	,	Loaded	Per	Gross	Net	Service	able		Per cent	
		operated	miles	and helper	Light	(thou- sands)	cent	& tenders	rev. and non-rev.	Unstored		B.O.	B.O.	
	Boston & Maine	1,690 1,691	259,643 251,812	266,496 261,276	$12,090 \\ 13,275$	9,853 9,582	69.6 71.6	623,596 585,845	261,726 248,923	85 93	9 5	14	13.0 4.9	
Ž	N. Y N. H. & Htfd1952	1,765 1,766	285,467 282,721	285,576 283,377	22,227 22,344	11,322 10,639	$71.0 \\ 70.0$	693,610 682,417	298,239 309,522	91 101	4	8 12	7.8 10.6	
	Delaware & Hudson1952	793	240,043	276,905	20,646	10,427	70.1	750,034	403,068	83	18	41	28.9	
	Del., Lack. & Western1951	793 964	245,682 265,969	285,376 287,189	20,668 25,426	10,643 $12,363$	72.9 70.5	740,676 810,514	407,465 373,873	161 76	26 6	28 8	13.0 8.9	
=	Erie	$\frac{966}{2,242}$	239,303 571,104	263,078 577,602	32,590 35,972	11,511 $32,029$	72.8 69.2	735,831 $2,002,047$	345,341 852,599	81 157	13	39 16	31,2 8.6	
Region	Grand Trunk Western1951	2,245 952	597,358 250,551	613,985 255,188	42,625 2,479	32,284 8,419	72.4 63.8	1,968,807 578,698	866,240 251,325	193 61	8	28 11	$\frac{12.2}{15.3}$	
	1951 Lehigh Valley	974 1,207	214,585 230,518	219,587 234,440	2,512 10,886	8,068 11,456	70.6 70.3	512,240 754,087	228,824 359,011	52 38	5	18 5	25.7 10.4	
Lakes	New York Central	1,216 10,675	228,339 2,903,847	240,626	23,406 149,194	11,335 106,535	72.4 61.7	733,385 7,683,868	350,922	51 951	2 45	293	11.7 22.7	
Great	New York, Chic. & St. L 1952	10,677 2,161		2,774,247 787,626	159,290 11,665	94,267 29,729	64.8 65.7		3,102,245 934,437	1,042 200	15 18	348 31	24.8 12.4	
	Pitts. & Lake Erie	2,162 221	685,761 87,303	702,441 90,035	10,922	24,962 3,955	71.0 67.6	1,666,661 332,208	793,064 203,540	216 34	1 3	35 10	13.9 21.3	
	1951 Wabash	221	87,050	89,346	56	3,324	67.1	274,629	165,399	33	19	13	28.3 17.2	
	1951	2,381 2,381	518,457 516,183	523,939 521,201	7,292 8,507	22,829 22,869	70.7 74.1	1,439,334 $1,365,231$	621,815 589,928	$\begin{array}{c} 125 \\ 132 \end{array}$	1	30 86	39.3	
	Baltimore & Ohio	6,082 6,083	1,625,580 1,588,965	1,848,366 $1,829,232$	199,390 188,985	65,794 59,983	63.4 67.1	4,911,181 4,327,410		605 683	86 69	150 187	17.9 19.9	
ion	Central of New Jersey1952	411 410	67,925 69,827	68,501 69,953	3,399 3,386	2,638 2,501	65.7 66.6	197,074 184,217	103,125 95,914	30 41	i	7	18.9 8.7	
Reg	Central of Pennsylvania 1952 1951	207 210	63,128 57,892	69,882 63,801	12,432 10,871	2,587 2,192	68.1 69.6	193,323 160,198	105,334 86,112	39 33	3	5 15	10.6 29.4	
BED	Chicago & Eastern III1952	868 886	128,022	128,022	3,201	5,098	67.2	348,902	171,239	27		1	6.9	
Eastern Region	Elgin, Joliet & Eastern 1952	236	121,129 86,598	121,129 87,534	2,876 344	5,050 2,864	73.1 60.8	321,891 239,413	160,835 $128,694$	26 42		2	4.5	
al I	Pennsylvania System1951	9,961		88,614 3,247,795	742 334,590	3,372 $126,117$	67.6 64.5		144,757 4,233,274	1,090	104	346	22.5	
Central	Reading	1,320	2,724,740 387,456	398,603	327,608 26,169	115,254 $14,334$	64.1	1,147,185	3,768,347 $626,518$	1,316 186	iś	285 27	17.8 11.8	
0	Western Maryland	1,311 836	355,747 $200,441$	368,834 232,959	$26,480 \\ 24,969$	$\frac{13,060}{7,137}$	66.3 64.0	1,022,543 $585,282$	561,209 329,034	183 123	5	40 19	17.5 12.9	
	1951	837 5,037	174,829 1,414,046	205,114	25,115 56,801	6,149 63,433	64.0 56.0	504,192 5.554,275	281,993 3.083.539	126 508	10 22	18 193	11.7 26.7	
ося	Chesapeake & Ohio		1,351,620 740,412		58,350 68,824	55,800 34,206	59.8 58.5	4,616,106 3,113,448	2,558,116	534 252	11	246 19	$\frac{31.1}{6.7}$	
= _		2,113	685,463	732,088	54,639	30,409	60.9	2,608,077	1,420,989	243	16	27 78	9.4 19.3	
	Atlantic Coast Line	5,461 $5,432$	886,423 892,686	886,546 906,455	10,937 $13,820$	29,255 27,312	60.8 64.8	2,069,019 1,874,105	928,014 869,488	301 343	25	98	22.2	
-	Central of Georgia	1,754 1,783	237,170 285,063	238,510 $288,450$	4,052 5,114	7,708 8,237	$70.1 \\ 75.4$	516,850 522,320	$241,720 \\ 251,333$	92 105	3	6	5.0 5.4	
Region	Gulf, Mobile & Ohio	2,830 2,851	305,283 285,880	305,283 285,880	357 228	15,778 14,697	72.8 76.6	1,019,925 $920,992$	493,247 448,292	83 79	5	3 4	3.5 4.8	
	Illinois Central	6,539	1,530,733 1,387,942	1,393,302	53,561 49,361	52,968 48,554	63.0 67.1	3,833,187 3,417,338	1,640,572	570 592		78 65	9.9	
Southern	Louisville & Nashville		971,441 1,053,833		27,393 30,698	34,487 $32,786$	63.5 67.1	2,527,835 2,328,695	1,198,167	318 340	50 8	48 95 .	11.5 21.4	
Sout	Nash., Chatt. & St. Louis 1952 1951	1,032 $1,049$	204,997 201,877	208,620 206,134	3,333 3,387	6,706 6,436	70.7 79.9	437,256 381,187	206,271 $186,272$	48 71	9	16	9.5 18.4	
32	Seaboard Air Line1952	4,135 4,136	760,561 710,799	772,163 734,150	2,974 5,070	28,040 25,175	64.3 68.6	2,004,618 1,735,939	897,771 807,783	214 244	53 17	22 67	$\frac{7.6}{20.4}$	
	Southern	6,264	1,130,106 1,093,457	1,131,919	12,103 12,519	41,219 37,596	70.1 72.6		1,225,314	348 404	24 7	74 171	16.6 29.4	
	Chicago & North Western1952	7,889	817,431	826,816	19,641	29,965	66.2	2,085,445	943,898 764,940	288 291	13	144	$\frac{32.4}{33.2}$	
Region	Chicago Great Western1952	7,920 1,441	762,013 146,201	777,320 $146,201$	24,019 6,041	25,498 8,563	70.6 68.4	1,739,582 563,546	249,298	33		i	2.9	
	Chic., Milw., St. P. & Pac 1952		129,659 1,139,598		9,203 $41,589$	8,098 44,181	74.0 65.3	min - min -	242,027 1,396,927	35 403	57	75	14.0	
2 0	Chic., St. P., Minn. & Omaha. 1952	1,606	1,083,536	226,938	45,053 10,917	40,789 $6,225$	70.7 65.7	2,658,017 449,495	1,256,141 $205,171$	438 57	56	79 52	13.8 47.7	
ster	Duluth, Missabe & Iron Range . 1952	1,606 567	195,993 43,101	207,232 $43,721$	12,263 831	5,095 816	73.0 53.9	$345,772 \\ 60,041$	165,412 27,991	71 30	8	29 37	29.0 49.3	
Northwes	Great Northern	564 8,181	49,932 1,031,657	50,511 1,035,467	820 39,620	$\frac{1,022}{38,351}$	53.5 68.2	88,269 2,636,809	47,102 $1,239,079$	30 316	123	26 65	$\frac{40.0}{12.9}$	
ort	Minneap., St. P. & S. Ste. M 1952	8,220 4,173	965,986 404,328	966,592 411,057	41,488 3,058	35,423 12,954	75.3 64.3	2,295,526 894,473	1,110,243 $422,572$	338 108	97	70 10	13.9 8.5	
Z	Northern Pacific	4,179 6,591	364,947 787,083	371,201 814,782	5,336 32,683	11,511 $31,134$	$74.1 \\ 70.3$	730,184 2,150,550	364,434 1,026,470	105 321	19	16 72	$\frac{13.2}{17.5}$	
	1951	6,591	693,367	725,515	38,539 96,010	27,313	75.7 67.7	1,816,589 6,791,512	876,999	326 570	15 71	69 154	16.8 19.4	
lon	G. C. & S. F. and P. & S. F.)1951	13,096	2,324,993 2,319,200	2,453,833	85,392	101,703 97,849	70.3	6,284,096	2,579,760	644 369	65 43	173 106	19.6 20.5	
Region	Chic., Burl. & Quincy	8,788	1,106,512 1,189,054	1.210.030	39,834 57,320	47,578 51,238	65.7 69.5	3,278,213 3,459,593	1,652,305	409 221	17 8	118 62	21.7 21.3	
	Chic., Rock I. & Pac	7,903	1,064,567 1,017,166	1,041,847	16,692 19,456	39,466 40,192	61.4 70.0	2,876,412 2,607,704 977,127	1,162,979	278	2 14	50 36	15.2 22.2	
Western	Denver & R. G. Wn	2,333 2,334	305,451 289,797	340,211 $318,527$	45,639 35,289	14,206 $12,358$	71.9 68.3	803,770	394,330	112 106	32	27	16.4	
Central W	Southern Pacific	8,054	1,978,748 : 1,709,034	1,813,327	253,836 274,784	89,567 78,545	67.0 72.6	6,030,629 4,967,707	2,597,582 2,179,471	625 739	30 6	169 140	20.5 15.8	
	Union Pacific	9,720	2,286,315 2,110,566	2,200,333	163,458 $165,158$	93,840 86,453	64.7 70.8	6,526,321 5,741,195	2,911,781 2,617,631	610 595	46 63	156 126	19.2 16.1	
ತ	Western Pacific	1,190 1,190	225,993 191,951	230,591 198,135	15,089 17,859	10,113 $9,577$	70.9 79.4	670,574 599,019	314,886 291,150	41 43	10 14	17 35	25.0 38.0	
Region	International-Gt. Northern*1952	1,104 1,104	190,371	190,371 $177,722$	957	6,558 5,850	65.3 66.3	483,264 414,881	226,706 184,199	44 54	i	12	21.4 14.1	
	Kansas City Southern	1,104 886 886	177,301 175,571 166,713	175,885	257 231 421	9,410 8,794	70.7 70.8	653,264	320,628 267,424	27 34	5	12 20	27.3 33.3	
	MoKansTexas Lines1951	3,230	166,713 413,646	167,783 415,541	6,343	16,036	65.4	653,264 574,782 1,072,024 847,255	474,891 369,770	95 91	17	8 33	6.7 24.8	
	Missouri Pacific*		362,711 1,204,339		6,142 16,202	13,299 47,055	66.3	3,410.094	1,434,229	324	7	50	13.1	
steri	1951 Texas & Pacific	1,832	1,186,956 1 360,954	360,954	19,139 10,549	43,032 15,086	69.1 62.8	2,839,139 1,060,846	405,591	362 61	16	50 51	12.1 39.8	
Me	St. Louis-San Francisco1952	1,844 4,567	326,879 643,200	326,879 644,891	$12,164 \\ 6,254$	12,807 $23,734$	64.9 65.4	$873,150 \\ 1,622,540$	331,095 725,636	80 184	47	91	5.7 28.3	
Southwestern	St. Louis Southw. Lines 1951	4,604 1,562	656,019 334,991	662,750 336,366	7,930 4,580	23,363 15,606	70.2 74.9	1,486,483 934,666	671,801 417,809	212 61	59 31	85 21	23.9 18.6	
00	1951 Texas & New Orleans	1,562 4,290	327,299 739,104	330,302 $739,278$	4,411 17,712	13,150 28,825	72.8 68.4	788,266 1,933,322	352,366 864,938	75 217	10	19 59	18.3 21.4	
	1951	4,314	719,196	719,440	25,023	25,534	70.3	1,633,496	731,360	215		61	22.1	

for the Month of February 1952 Compared with February 1951

			Freight o	ars on line		G.t.m.pe	r G.t.m.pe	er Net	Net	Net	Car-	Net	Train-	Miles
	Region, Road and Year				Per Cent		s excl.loco		per l'd	ton-mi	i. miles per car-	daily ton-mi. per	miles per train-	loco. per
7,000			Foreign	Total	B.O.	tenders	tenders	mile	mile	day	day	road-mi	. hour	day
e w	Boston & Maine	1,211 1,307	9,311 10,428	10,522 $11,735$	2.5	38,673 36,112	2,407 $2,331$	1,101 990	26.6 26.0	876 772	47.4	5,340 5,257	16.1 15.5	99.4 100.1
Z	5 2 N. Y., N. H. & Htfd 1952 1951	1,531 $1,345$	13,545 $19,772$	$15,076 \\ 21,117$	$\frac{3.4}{1.1}$	$37,171 \\ 35,142$	$2,433 \\ 2,419$	$1,046 \\ 1,097$	$\frac{26.3}{29.1}$	696 529	$\frac{37.2}{26.0}$	5,827 6,260	15.3 14.6	$119.3 \\ 110.0$
	Delaware & Hudson	$\frac{3,435}{1,778}$	5,835 7,006	9,270 8,784	6.0 4.2	60,370 $54,967$	3,140 3,028	1,688 1,666	38.7 38.3	1,474 $1,673$	54.4 60,0	17,527 $18,351$	19.3 18.2	75.3 53.4
_	Del., Lack. & Western1952	5,152 4,047	10,646 11,567	15,798 15,614	5.9 8.0	50,227 $44,407$	$3,086 \\ 3,130$	1,423 $1,469$	30.2 30.0	821 781	38.5 35.8	13,374 $12,768$	16.5 14.4	129.8 92.3
Region	Erie1952 1951	6,142	21,279 $23,264$	28,689 29,406	4.2 3.9	60,319 $54,342$	$3,537 \\ 3,331$	1,506 1,466	26.6 26.8	1,040 $1,071$	56.5 55.1	13,113 13,780	17.2 16.5	123.6 112.8
	1,01	3,884 3,122	8,462 $12,272$	12,346 15,394	3.5 4.5	47,237 43,815	2,324 2,428	1,009 $1,084$	29.9 28.4	688 539	36.1 26.9	9,103 8,390	20.5 18.4	135.3 122.3
Great Lakes	Lehigh Valley	2,084 3,396	12,851	14,935 14,943	6.2 7.0	66,846 62,984	3,309 3,247	1,576 $1,554$	$\frac{31.3}{31.0}$	821 796	37.3 35.5	10,257 $10,307$	20.4 19.6	186.9 157.3
at L	New York Central	59,032 50,162	102,277 115,892	161,309 166,054	6.6 4.4	44,694 38,576	2,691 2,658	1,214 $1,232$	$\frac{32.5}{32.9}$	729 616	36.3 28.8	11,196 $10,377$	16.9 14.8	94.0 83.6
Gre	New York, Chic. & St. L1952 1951	6,878 $4,257$	18,746 $22,442$	25,624 26,699	5.2 3.7	48,989 39,719	2,727 2,509	1,230 $1,194$	$\frac{31.4}{31.8}$	1,273 1,036	61.6 46.0	14,911 $13,101$	18.2 16.3	118.2 108.6
	Pitts. & Lake Erie1952	3,377 3,370	9,667 10,099	13,044 13,469	6.5 10.7	56,183 46,257	3,822 3,162	2,342 1,904	51.5 49.8	530 376	15.2 11.3	31,758 26,729	14.8 14.7	69.2 75.4
	Wabash	6,818 $4,939$	13,576 $17,795$	20,394 $22,734$	$\frac{4.6}{2.2}$	62,142 $52,064$	2,795 2,699	1,208 $1,166$	27.2 25.8	1,030 982	$\frac{53.5}{51.3}$	9,005 8,849	$\frac{22.4}{19.7}$	113.7 91.7
	Baltimore & Ohio	45,043 41,670	47,308 $60,225$	92,351 101,895	5.4 5.6	43,537 36,515	$3,059 \\ 2,782$	1,518 $1,379$	37.0 35.8	892 774	$\frac{38.0}{32.2}$	13,818 12,599	$\frac{14.4}{13.4}$	86.4 78.6
Region	Central of New Jersey1952	320 335	8,979 9,534	9,299 9,869	$\frac{3.5}{2.7}$	37,761 36,378	$\frac{3,013}{2,767}$	1,577 $1,441$	39.1 38.4	381 340	$\frac{14.8}{13.3}$	8,652 8,355	$13.0 \\ 13.8$	105.4 85.3
Reg	Central of Pennsylvania1952	1,527 962	3,755 $3,429$	5,282 4,391	$\frac{20.1}{16.9}$	42,155 39,448	3,233 2,944	1,762 $1,583$	40.7 39.3	684 687	$24.7 \\ 25.1$	17,547 14,645	$\frac{13.8}{14.3}$	77.0 64.4
Eastern	Chicage & Eastern III1952	$\frac{2,156}{1,716}$	$\frac{3,597}{4,251}$	5,753 5,967	4.8 5.8	45,560 42,226	2,732 2,682	$1,341 \\ 1,340$	33.6 31.8	1,047 887	46.4 38.1	6,803 6,483	16.7 15.9	162.8 170.0
Eas	Elgin, Joliet & Eastern 1952 1951	6,417 $5,792$	16,093 16,506	$\frac{22,510}{22,298}$	$\frac{3.0}{2.0}$	15,728 $18,154$	2,838 3,201	$\frac{1,525}{1,770}$	44.9 42.9	188 254	6.9 8.7	18,804 $21,722$	5.7 5.9	100.5 118.9
	Pennsylvania System1952	94,011 90,805	119,522 $123,538$	213,533 214,343	8.4 10.3	48,624 39,541	3,057 2,929	1,448 1,437	33.6 32.7	683 630	31.6	14,655 13,398	16.3 14.0	86.8 82.4
Central	Reading	13,069 9,495	20,934 24,489	34,003 33,984	3.4	39,426 36,707	2,963 2,877	1,618 1,579	43.7 43.0	641 589	$\frac{22.9}{20.7}$	16,367 15,288	13.3 12.8	74.7 73.5
	Western Maryland	4,771	4,688 4,830	9,459 9,301	$\frac{1.9}{1.7}$	43,045 39,785	2,975 2,924	1,673 1,636	46.1 45.9	1,229 1,086	$\frac{41.7}{37.0}$	13,572 $12,032$	14.7 13.8	64.3
· B	5.5 Chesapeake & Ohio1952	51,716 42,999	22,045 24,409	73,761 67,408	4.6 5.4	68,070 55,592	3,973 3,476	$\frac{2,206}{1,927}$	48.6 45.8	1,451 1,348	53.3 49.2	21,110 18,120	17.3	81.0 72.8
Poca-	Norfolk & Western 1952 1951	35,974 27,432	8,155 8,437	44,129 35,869	2.8	68,098 62,791	4,300 3,875	2,352 2,111	49.8 46.7	1,337 1,400	45.9 49.2	27,784 24,018	16.3 16.2 16.5	114.4 105.7
	Atlantic Coast Line1952	14,394	19,981	34,375	2.5	38,329	2,344	1,051	31.7	942	48.8	5,860	16.4	83.2
	Central of Georgia	11,246 $2,584$	24,006 6,388	$35,252 \\ 8,972$	2.4 5.0	32,586 38,808	2,114 $2,193$	981 1,026	$\frac{31.8}{31.4}$	871 930	$\frac{42.2}{42.3}$	5,717 4,752	15.5 17.8	82.3 90.1
on	Gulf, Mobile & Ohio	$\frac{1,755}{3,992}$	6,731 $11,405$	8,486 15,397	2.9 3.5	31,575 65,468	1,843 3,348	887 1,619	30.5 31.3	1,086 $1,113$	47.2 48.9	5,034 6,010	17.2 19.6	99.9 131.1
Region	Illinois Central1951	2,780 26,046	11,139 30,988	13,919 57,034	2.7	60,868 42,555	3,239 2,546	1,577 1,176	30.5 33.4	1,064 1,057	45.5 50.2	5,616 9,340	18.9 17.0	131.9 89.7
	Louisville & Nashville	17,240 $31,928$	$36,180 \\ 15,761$	53,420 47,689	2.5 6.1	40,497 $40,115$	2,507 2,606	1,203 1,316	$\frac{33.8}{37.0}$	1,088 972	48.0 41.4	$8,960 \\ 9,254$	16.4 15.4	84.0 97.7
Southern	Nash., Chatt. & St. Louis1952	27,207 1,589	$\frac{17,414}{5,029}$	44,621 6,618	7.9 3.7	$33,201 \\ 41,751$	2,217 2,137	1,141 1,008	36.5 30.8	1,090	38.4 50.1	8,973 6,892	15.0 19.6	101.7 126.8
S	Seaboard Air Line	1,056 10,586	5,081 17,590	6,137 28,176	2.7	38,550 47,416	1,893 2,686	925 1,203	28.9 32.0	1,100 $1,089$	47.6 52.9	6,342 7,487	20.4 18.0	91.5 107.8
	Southern	7,852 14,307	17,582 29,620	25,434 43,927	1.7 3.5	43,036 40,311	2,501 2,355	1,164 1,093	32.1 29.7	1,095 966	49.7 46.4	6,975 6,745	$17.6 \\ 17.2$	91.9 92.2
	Chicago & North Western1952	12,349 18,644	31,085 31,606	43,434 50,250	2.6 3.7	34,908 41,577	2,159 2,675	1,002 1,211	28.8 31.5	913 631	43.7 30.3	6,134 4,126	16.4 16.3	73.6 72.6
a	Chicago Great Western1951	14,945 1,481	40,435 5,336	55,380 6,817	3.7 3.0	34,873 70,531	2,408 3,867	1,059 $1,711$	$\frac{30.0}{29.1}$	$\frac{512}{1,261}$	24.2 63.3	3,449 5,966	15.3 18.3	71.3 161.2
Region	Chic., Milw., St. P. & Pac 1951	949 30,559	7,063 32,838	8,012 63,397	2.3 3.8	56,188 45,096	4,075 2,687	1,908 $1,233$	29.9 31.6	1,106 745	50.0 36.1	5,998 4,517	14.1 16.9	149.7 85.1
B	Chic., St. P., Minn. & Omaha 1952	$21,379 \\ 1,178$	47,410 $9,221$	68,789 10,399	$\frac{2.7}{3.3}$	36,966 31,775	$2,486 \\ 2,137$	1,175 975	30.8 33.0	642 674	29.5 31.1	4,207 4,405	15.1 15.6	78.9 85.6
stern	Duluth, Missabe & Iron Range . 1952	999 12,263	8,712 1,336	9,711 13,599	$\frac{3.1}{2.9}$	23,822 20,811	1,895 1,484	906 692	$32.5 \\ 34.3$	625 73	26.4 3.9	3,678 1,702	13.5 14.9	87.8 25.4
Northwe	Great Northern	8,393 $21,511$	684 $21,868$	9,077 43,379	3.4 3.9	25,430 43,448	$\frac{1,870}{2,573}$	998 1,209	46.1 32.3	179 1,026	7.3 46.6	2,983 5,223	$\frac{14.4}{17.0}$	35.5 79.0
lort	Minneap., St. P. & S. Ste. M 1952	15,257 6,056	$16,240 \\ 11,208$	31,497 $17,264$	3.1 4.4	39,789 41,417	2,397 2,229	1,159 $1,053$	31.3 32.6	1,198 867	$50.8 \\ 41.3$	4,824 3,492	16.7 18.7	76.3 130.7
2	Northern Pacific	4,333 17,649	11,028 17,881	15,361 35,530	6.5 5.4	35,176 47,073	2,035 2,753	1,016 $1,314$	31.7 33.0	887 1,009	37.8 43.5	3,115 5,370	$17.6 \\ 17.2$	122.8 77.4
	Atch., Top. & S. Fe (incl. 1952	14,075 47,478	13,653 32,702	27,728 80,180	$\frac{5.0}{4.2}$	44,349 62,975	2,652 $2,931$	1,280 1,221	32.1 27.8	1,092 1,224	45.0 65.0	4,752 7,461	16.9 21.6	72.5 115.1
Region	G. C. & S. F. and P. & S. F.). 1951 Chic., Burl. & Quincy 1952	36,859 16,477	34,390 24,677	71,249 41,154	4.3 3.4	57,235 58,524	2,725 $2,971$	1,118 1,365	26.4 31.7	1,309 1,257	70.7 60.4	7,035 5,915	21.1 19.8	109.5 81.7
Reg	1951 Chic., Rock I. & Pac1952	14,367 11,774	31,674 24,223	46,041 35,997	3.7 3.6	52,830 50,195	2,931 2,713	1,400 1,142	32.2 30.7	1,293 1,171	57.7 62.2	6,715 5,284	18.2 18.6	87.5 135.7
estern	Denver & R. G. Wn	8,667 7,329	24,807 7,633	33,474 14,962	2.8 3.1	45,204 51,785	2.579	1,150 1,693	28.9 36.2	1,235 1,229	61.0	5,256 7,605	17.6 16.2	120.8 90.3
Wes	Southern Pacific	7,444 26,248	6,257 45,196	13,701 71,444	3.5 2.5	47,004 $51,341$	3,216 2,794 3,082	1,372 $1,327$	31.9 29.0	974 1,238	47.2 44.7 63.7	6,037 11,084	16.9 16.8	80.8 104.5
ra	Union Pacific	23,477 27,529	38,336 37,395	61,813 64,924	2.4 2.6	49,113 64,070	2,955 2,908	1,297 1,297	27.7 31.0	1,218 1,615	60.5 80.5	9,665 10,176	16.9 22.4	89.1 112.7
Central	Western Pacific	23,313 2,381	35,034 2,615	58,347 4,996	2.6 4.5	61,186 65,231	2,771 3,003	1,264 1,410	30.3 31.1	1,586 1,982	74.0 89.7	9,618 9,124	22.5 22.0	110.5 124.9
0	1951	1,380	3,287	4,667	8.3	71,219	3,166	1,539	30.4	2,212	91.6	8,738	22.8	85.3
	International-Gt. Northern*1952	891 831	7,734 6,811	8,625 7,642	2.3 1.6	52,678 45,223	2,556 2,365	1,199 1,050	34.6 31.5	956 864	42.3	7,081 5,959	20.8 19.3	117.2 106.7
rion	Kansas City Southern	1,164 965	6,558 5,998	7,722 6,963	4.3 2.8	75,644 66,037	$3,740 \\ 3,494$	1,836 1,626	34.1 30.4	1,473 $1,340$	61:2 62.2	12,479 $10,780$	$\frac{20.3}{19.2}$	159.0 107.8
Region	MoKansTexas Lines1952	3,556 $2,535$	8,121 7,580	11,677 $10,115$	6.0 4.4	53,792 43,858	$2,600 \\ 2,343$	$1,152 \\ 1,023$	29.6 27.8	1,497 $1,314$	$77.3 \\ 70.4$	5,070 4,087	20.8 18.8	$133.2 \\ 106.2$
	Missouri Pacific*1952 1951	17,736 $13,978$	$17,500 \\ 20,309$	35,236 34,287	$\frac{2.3}{2.7}$	56,980 47,172	2,689 2,417	$1,198 \\ 1,110$	30.5 30.3	$\frac{1,399}{1,320}$	69.3 63.0	7,133 6,706	$\frac{21.3}{19.7}$	117.9 113.8
West	Texas & Pacific	2,226 $2,077$	8,244 8,355	10,470 $10,432$	4.9 5.6	64,356 57,290	2,945 $2,681$	1,126 $1,017$	26.9 25.9	1,374 1,181	$81.4 \\ 70.4$	7,634 $6,413$	$\frac{21.9}{21.4}$	$107.1 \\ 149.2$
Southwestern	St. Louis-San Francisco1952	9,750 5,690	14,090 15,978	23,840 21,668	$\frac{2.1}{2.8}$	47,060 39,780	2.531	1,132 $1,029$	30.6 28.8	1,055 1,147	52.8 56.8	5,479 $5,211$	18.7 17.6	75.7 74.5
So	St. Louis Southw. Lines 1952 1951	1,820 1,255	4,978 5,980	6,798 7,275	$\frac{2.3}{2.0}$	58,238 47,808	2,791 2,416	$1,248 \\ 1,080$	26.8 26.8	2,093 1,751	104.4 89.7	9,224 8,057	20.9 19.9	$113.2 \\ 124.3$
	Texas & New Orleans	4,794 3,121	18,455 $20,304$	23,249 23,425	$\frac{2.7}{2.7}$	49,850 41,800	2,635	1,179 1,028	30.0 28.6	1,326 $1,135$	64.6 56.4	6,952 6,05 5	19.1 18.4	100.6 101.9
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